

SERVICE
MANUAL

PM-94



marantz®

model PM-94

Stereo Amplifier

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound.

Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS:

Parts can be ordered either by mail or by telex. In both cases, correct part number has to be specified. If you order by mail, fulfil MARANTZ order forms.

The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

PARTS ORDERING

Parts may be ordered at the following addresses:

AUSTRIA

HORNYPHON
Vertriebsgesellschaft GmbH
Wienerbergstrasse 1
A 1101 Wien
Austria
Telex: 132.332

AUSTRALIA

MARANTZ AUSTRALIA
PTY., Ltd.
19 Chard Road
Brookvale, NSW 2100
Australia
Telex: 24121

BELGIUM

SVD DIVISION MARANTZ
Industrialaan 1
1720 Groot-Bijgaarden
Belgium
Telex: 24466

CHILE

MARANTZ
DIVISION OF PHILIPS S.A.
AV. Santa Maria, 0760
Casilla 2687
Santiago
Telex: 240.239

DENMARK

MARANTZ
DIVISION OF PHILIPS
SERVICE A/S
Prags Boulevard 80
Postbox 1919
DK-2300 København S
Denmark
Telex: 31201

FINLAND

MARANTZ
DIVISION OF OY PHILIPS Ab
Kaivokatu 8
00100 Helsinki
Finland
Telex: 124811

FRANCE

MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

GERMANY

MARANTZ GERMANY GmbH
Max-Planck-Strasse 22
6072 Dreieich 1
Germany
Telex: 529821

THE NETHERLANDS

Elpro b.v.
De Limiet 3
4131 NR Vianen
The Netherlands
Telex: 47679

NORWAY

MARANTZ
DIVISION OF PHILIPS A/S
Sandstuveien 40
Oslo 6
Norway
Telex: 72640

GREAT BRITAIN

MARANTZ AUDIO U.K. Ltd
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 0LW
Great Britain
Telex: 935196

GREECE

SHERTON ELECTRONICS S.A.
P.O.Box 21025
Hippocrates Street 188
Athens 11471
Greece
Telex: 216.795

JAPAN

MARANTZ JAPAN, Inc.
35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan

KUWAIT

AL ALAMIAH ELECTRONICS
Ussama Building
Fahd al Saleem Street
P.O.Box 23781
Safat-Kuwait
Telex: 22694

ITALY

MARANTZ ITALIANA S.P.A.
Via Chiese, 74
20126 Milano
Italy

TECHNICAL ASSISTANCE

Should you require any other technical support, do not hesitate to contact the Technical Department of P.M.A. MARANTZ INTERNATIONAL
Quality & Service Dept.
80, Rue des Deux Gares,
B-1070 Brussels
Belgium
Phone: 02/525.70.22 or 525.70.23
Telefax: 02/525.6160
Telex: 23550 OR
61511 (PHEMB) routing: BELDMZT

SAUDI ARABIA

AL ALAMIAH ELECTRONICS
P.O.Box 5954
University Street
Riyadh 11432
Saudi Arabia
Telex: 201530

SOUTH AFRICA

MARANTZ
DIVISION OF PHILIPS S.A.
Rainer House
Ove Street, 10
Doornfontein
Johannesburg
Telex: 483.456

SPAIN

PHONO S.A.
Ignacio Iglesias 10
Badalona (Barcelona)
Spain
Telex: 59355

SWEDEN

MARANTZ
DIVISION OF PHILIPS
Försäljning AB
Tegeluddsvägen 1
S-115 84 Stockholm
Sweden
Telex: 14060

SWITZERLAND

DYNAVON ELECTRONICS
Route de Villars 105
1701 Fribourg
Switzerland
Telex: 942377

TURKEY

DOGRUOL Ltd.
I.M.C.
6 Blok N°6310
Unkapani
Istanbul
Turkey
Telex: 22085

MALTA

CACHIA & GALEA
Republic Street, 68D
Valetta
Telex: 1682

U.S.A.

MARANTZ COMPANY, Inc.
National Service Department
P.O.Box 577
Chatsworth, CA 91311
U.S.A.

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

TABLE OF CONTENTS

SECTION	PAGE
INTRODUCTION	1
1. P.W. BOARDS	1
2. TEST EQUIPMENT REQUIRED FOR SERVICING	2
3. VOLTAGE CONVERSION	2
4. ADJUSTMENT PROCEDURE	3
5. BLOCK DIAGRAM	4
6. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS	5
6.1 Tone/Tape 1, 2/VCR/Muting Assembly (PT00) Schematic Diagram and Component Locations	5
6.2 Speaker Muting Delay Assembly (PR00) Schematic Diagram and Component Locations	5
6.3 Tone (L) Assembly (PE01) Schematic Diagram and Component Locations	6
6.4 Tone (R) Assembly (PE02) Schematic Diagram and Component Locations	6
6.5 Phone/Speaker Selector Assembly (PR50) Schematic Diagram and Component Locations	6
6.6 Power Amp.(L) Assembly (P600) Schematic Diagram and Component Locations	7
6.7 Power Amp.(R) Assembly (P700) Schematic Diagram and Component Locations	7
6.8 Soft Start Assembly (PN50) Schematic Diagram and Component Locations	9
6.9 Tape Play/Rec/VCR Assembly (PW00) Schematic Diagram and Component Locations	9
6.10 Comparator/Protect/Supply Assembly (PN00) Schematic Diagram and Component Locations	10
6.11 Main Volume Assembly (PQ00) Schematic Diagram and Component Locations	10
6.12 Phono Amp/Input Selector Assembly (P400) Schematic Diagram and Component Locations	11
6.13 Function Selector Assembly (PV00) Schematic Diagram and Component Locations	12
6.14 Function LED Assembly (PY00) Schematic Diagram and Component Locations	13
6.15 CD Direct/Balance etc. Assembly (PK00) Schematic Diagram and Component Locations	13
6.16 Power Transistor Assembly (PL00) Schematic Diagram and Component Locations	14
6.17 Flat Amp/Supply Assembly (PG00) Schematic Diagram and Component Locations	14
6.18 Tape/VCR/Muting Indicator Assembly (PZ00) Schematic Diagram and Component Locations	15
7. EXPLODED VIEW AND PARTS LIST	16
8. ELECTRICAL PARTS LIST	21
9. TECHNICAL SPECIFICATIONS	29
10. SCHEMATIC DIAGRAM	30

How to use this service manual

- The "Common parts" which Marantz Japan, Inc. has established are eliminated from this service manual.
- These "Common parts" are applied to all models in the service manuals arranged and issued by MJI.
- To indicate clearly the common parts in the schematic diagram, a line is drawn above or under the Ref. Desig. No. of applicable parts.
- "Common parts" can be supplied from the Marantz service center as ever.
In case of ordering, please establish the parts number of 10 figures following the procedure mentioned in this service manual "How to establish the parts number for common parts".

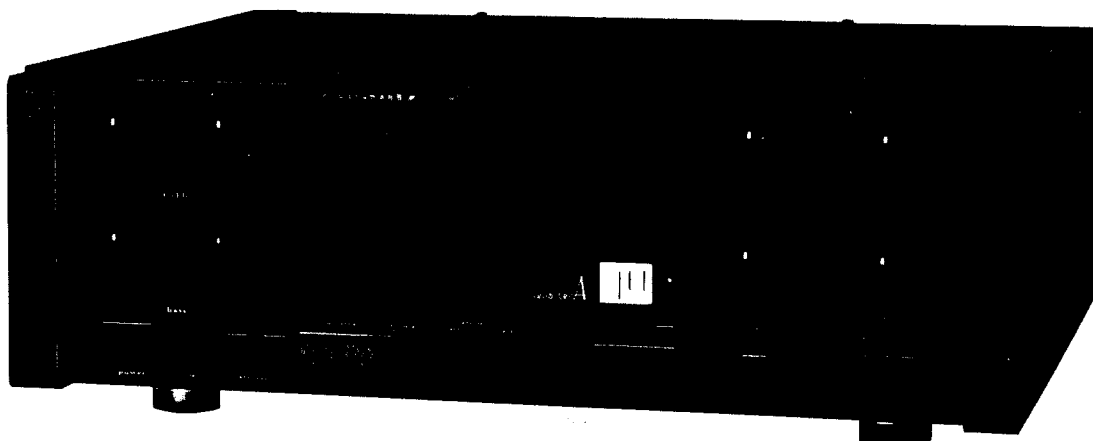
(NOTE)

When you order parts to the Marantz parts center, please take notice of the following points.

- 1) Please correctly write the parts number of 10 figures following the rule.
- 2) Since ordering parts by the Ref. Desig. No. or ratings indicated in the schematic diagram does not satisfy the above conditions, the Marantz parts supply system does not work properly.
As this case is apt to cause a trouble, please pay attention to it.

M6142

MODEL PM-94 STEREO AMPLIFIER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM-94 Stereo Amplifier.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM-94 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Tone (L) mounted on P.W. Board PEO1
2. Tone (R) mounted on P.W. Board PEO2
3. Flat Amp/Supply . . mounted on P.W. Board PGO0
4. CD Direct/
Balance etc mounted on P.W. Board PKO0
5. Power Transistor . . mounted on P.W. Board PLO0
6. Comparator/Protec/
Supply mounted on P.W. Board PNO0
7. Soft Start Ass'y . . . mounted on P.W. Board PN50
8. Main Volume mounted on P.W. Board PQO0
9. Speaker Muting
Relay mounted on P.W. Board PRO0
10. Phono/Speaker
Selector mounted on P.W. Board PR50
11. Tone/Tape 1, 2/
VCR/Muting mounted on P.W. Board PTO0
12. Function Selector . . mounted on P.W. Board PVO0
13. Tape Play/
Rce/VCR mounted on P.W. Board PW00
14. Function LED mounted on P.W. Board PY00
15. Tape/VCR/Muting
Indicator mounted on P.W. Board PZO0
16. Phono Amp/
Input Selector mounted on P.W. Board P400
17. Power Amp (L) mounted on P.W. Board P600
18. Power Amp (R) mounted on P.W. Board P700

4. ADJUSTMENT PROCEDURE

1. Adjustment of output offset voltage

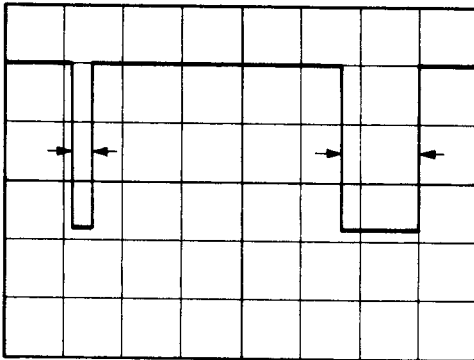
- 1) Remove the MAIN-IN and PRE-OUT plugs, and connect a digital voltmeter set to the DC range to the speaker terminals with no signal and no load on the unit.
- 2) Adjust R622 for L-ch and R722 for R-ch until the indication on the digital voltmeter is ± 10 mV.

2. Idling adjustment

- 1) With no signal or load on the unit, short TP-1 and TP-3 on the P.W. Board (PN00).
- 2) Connect a digital voltmeter set to the DC range between J607 and J707 and adjust J643 and J743 for 36 mV.
- 3) Remove the short between TP-1 and TP-3, and R642 and R742 so that the voltage between J607 and J707 is 180 mV.

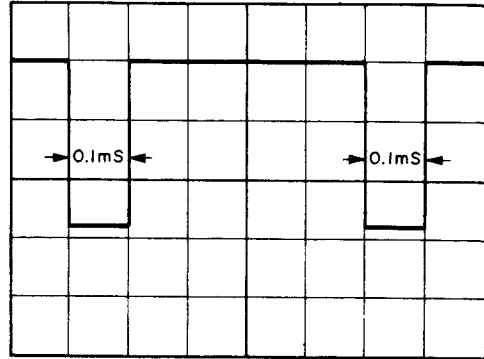
3. Adjustment of quarter "A"

- 1) Connect a DC voltmeter between the emitter and base of QL07 for L-ch. (The meter range is greater than 100 V, with the polarity of the emitter (+) and base (-).)
- 2) Connect the oscilloscope between TP-1 and TP-2 on the P.W. Board, and monitor the waveforms at TP-2 with TP-1 as the reference.
- 3) Connect an 8 ohm load to each of the speaker terminals, and input a 1 kHz to the L channel MAIN-IN. Adjust the input level so that the load on L-ch gives output of 17 V.
- 4) Rotate RN40 (RN41) on the P.W. Board (PN00) and monitor the waveforms on the oscilloscope.



- 5) Adjust RN42 (RN43) so that the pulse width is the same.

- 6) Adjust RN40 (RN41) again to make the pulse width 0.1 ms. Confirm that the voltage at the emitter of Q107 is 63 V.



- 7) Lower the input signal and confirm that the voltage at the speaker terminal is 16 V – 16.5 V and the voltage at the emitter of QL07 is 29 V at the point where the pulse disappears.
- 8) Next, connect the DC voltmeter between the emitter and base of QL08 for R-ch. (The meter range is greater than 100 V, with the polarity of the emitter (-) and base (+).)
- 9) Input a 1 kHz to the R channel MAIN-IN. Adjust the input level so that the load on R-ch gives output of 17 V.
- 10) Adjust items 4 to 7 in the same manner as L-ch. The adjustment locations are those shown in parenthesis.

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM-94 Stereo Amplifier.

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
AC VTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester	Trouble shooting
DC VTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors potential of primary power to amplifier
Variable Autotransformer (0 ~ 140V AC, 10A)	Adjust level of primary power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

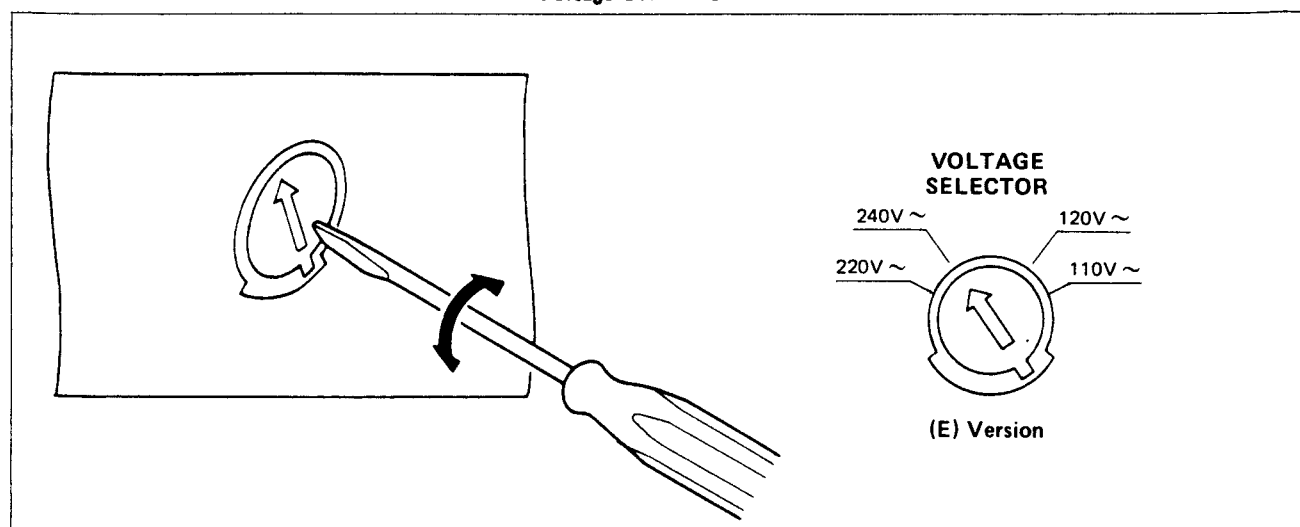
3. VOLTAGE CONVERSION

• EUROPEAN MODEL ONLY

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart

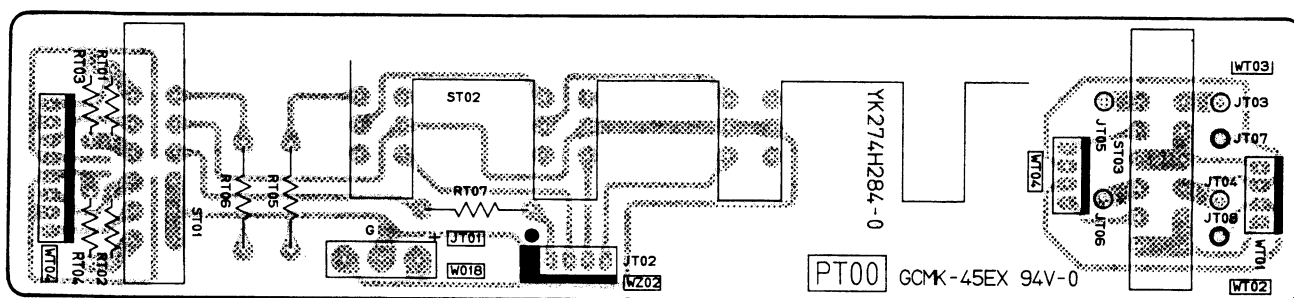
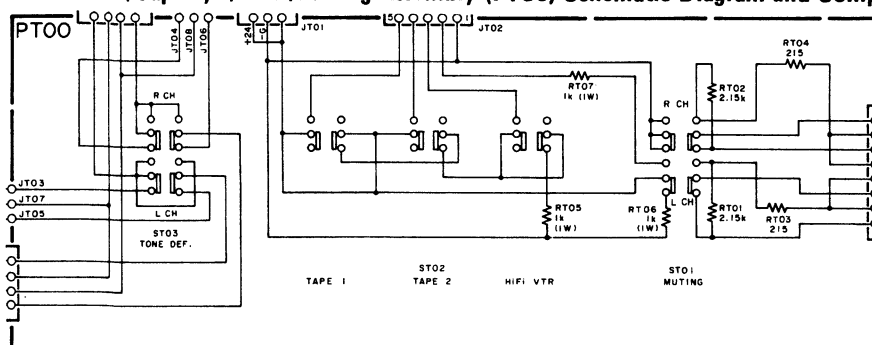


Note on safety: Symbol \triangle Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol \triangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

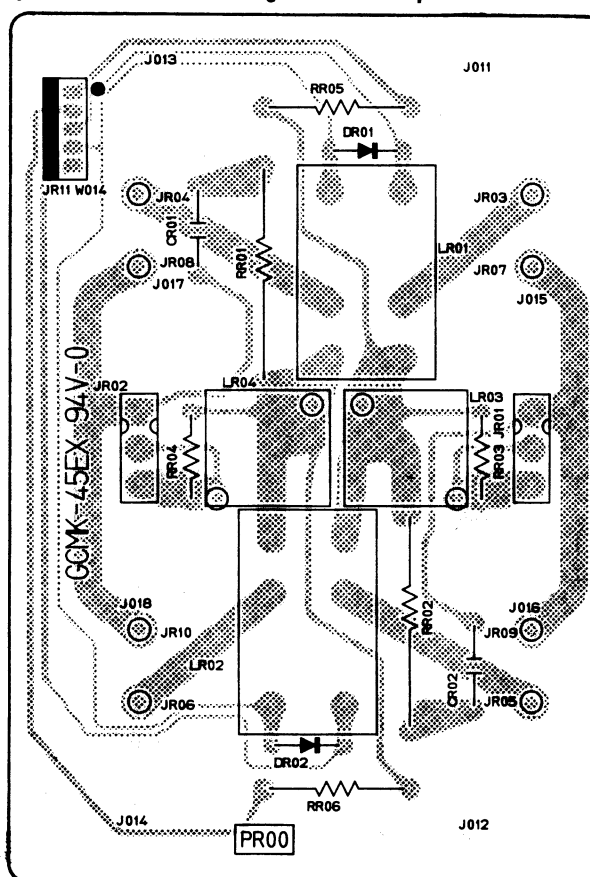
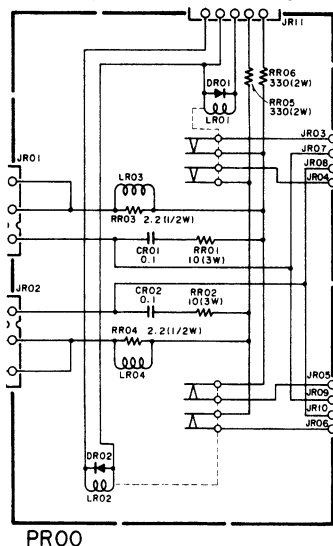
M6144

6. SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS

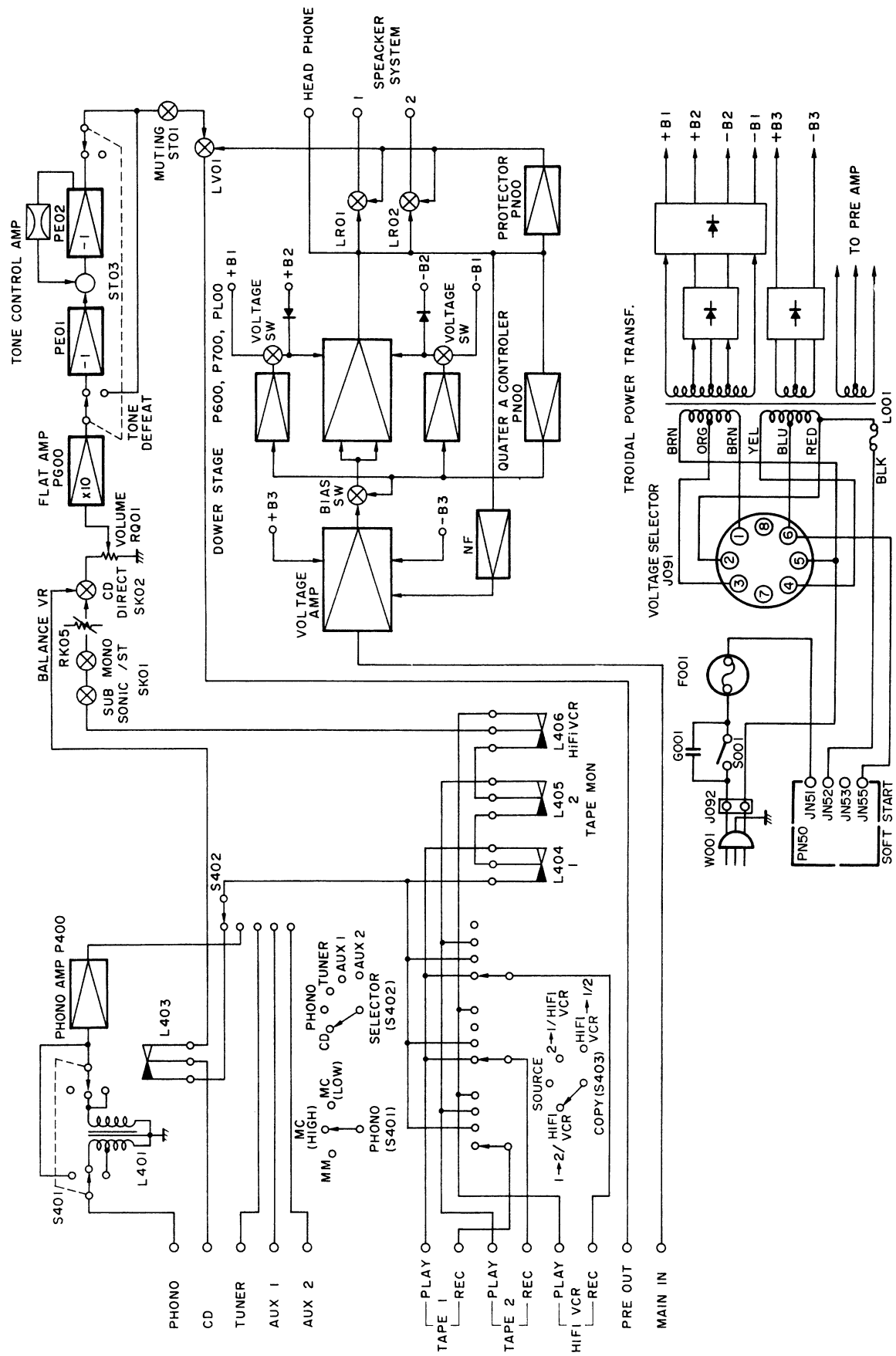
6.1 Tone/Tape 1, 2/VCR/Muting Assembly (PT00) Schematic Diagram and Component Locations



6.2 Speaker Muting Relay Assembly (PR00) Schematic Diagram and Component Locations

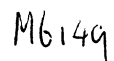


5. BLOCK DIAGRAM

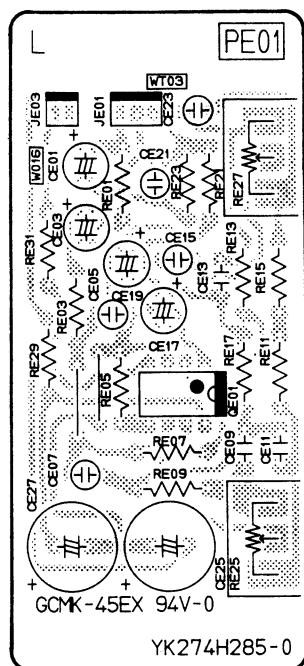
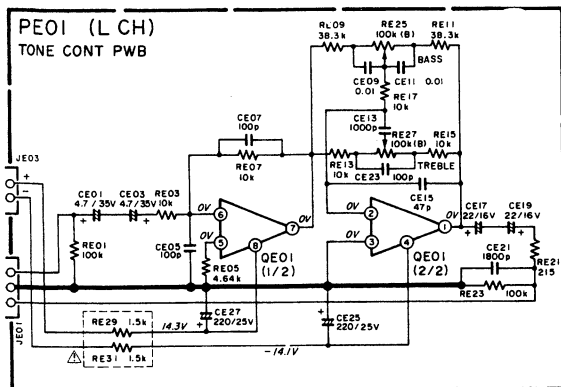


M6146

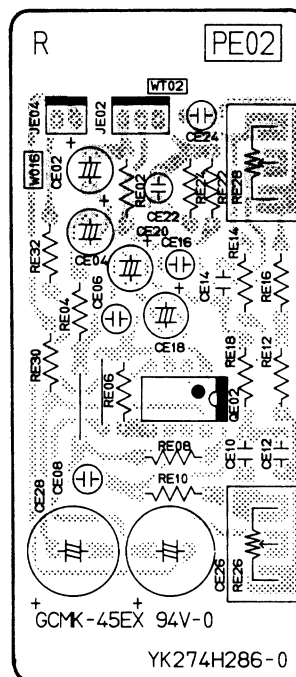
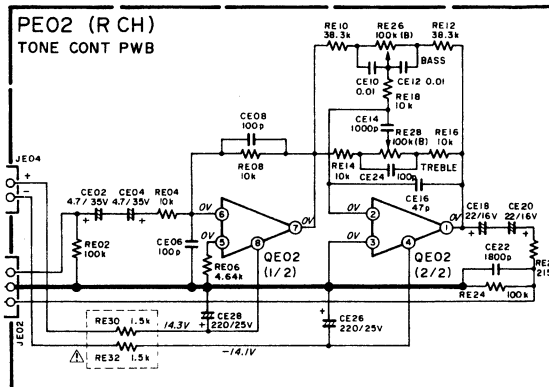
(CLASS A)



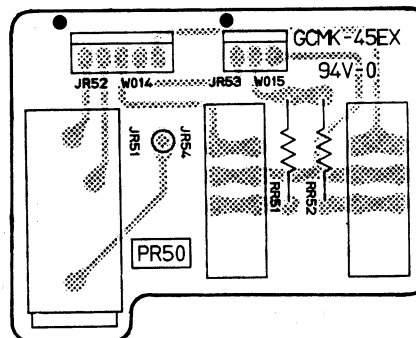
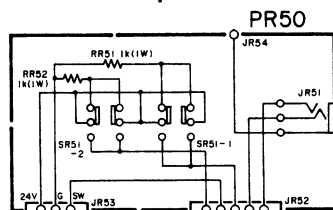
6.3 Tone (L) Assembly (PE01) Schematic Diagram and Component Locations

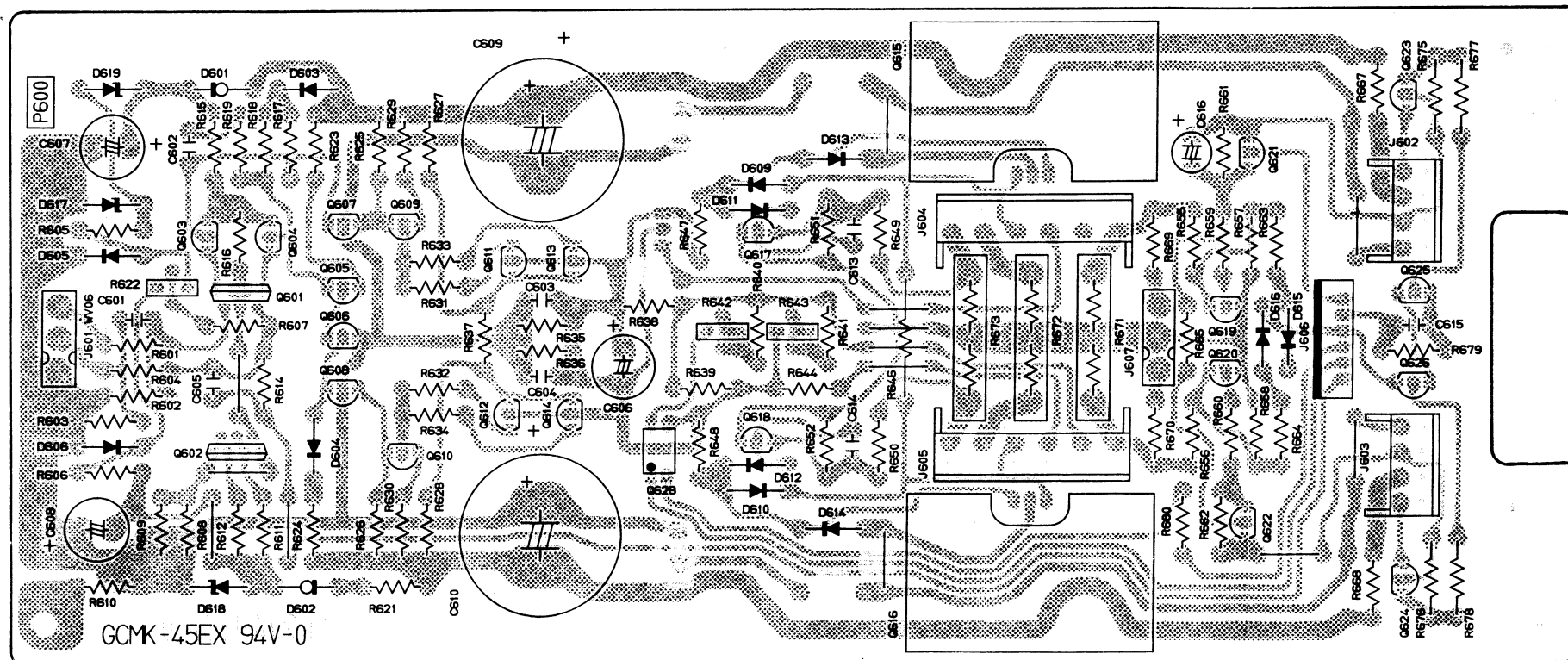


6.4 Tone (R) Assembly (PE02) Schematic Diagram and Component Locations

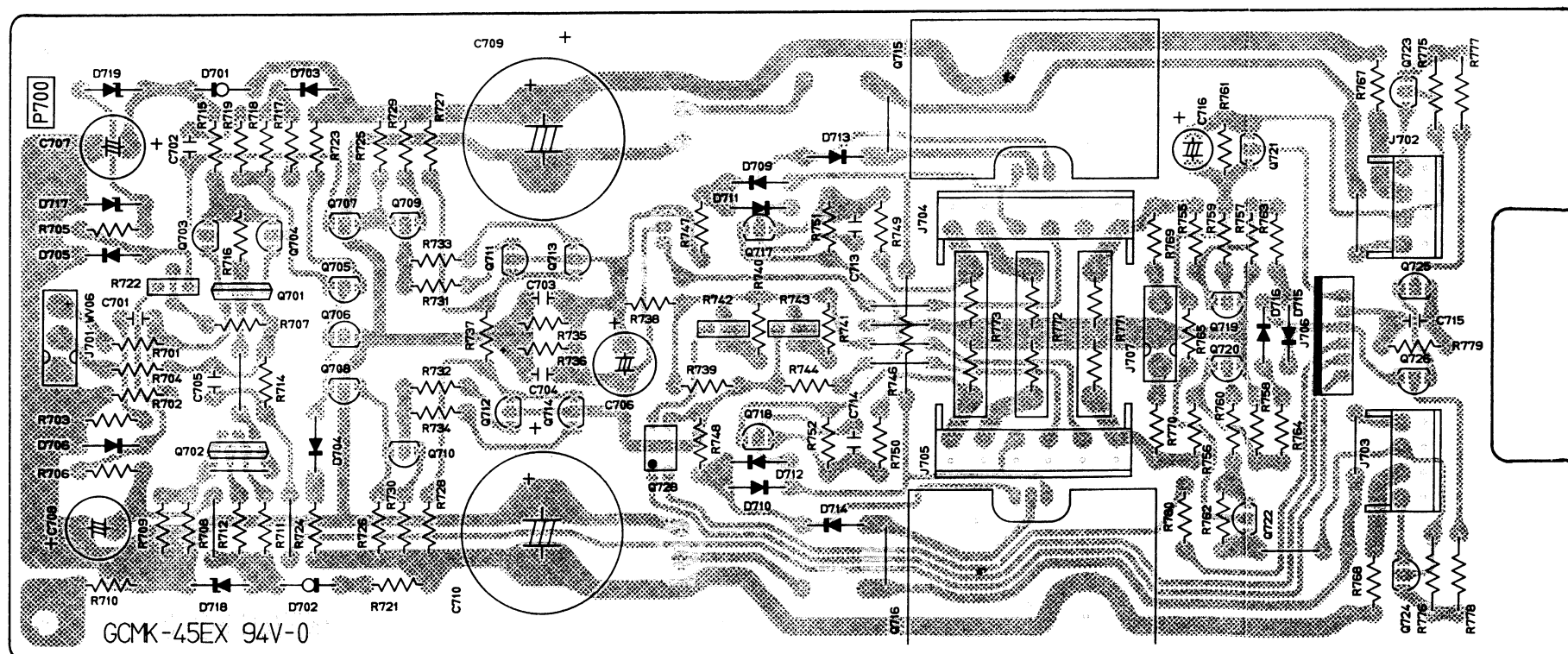
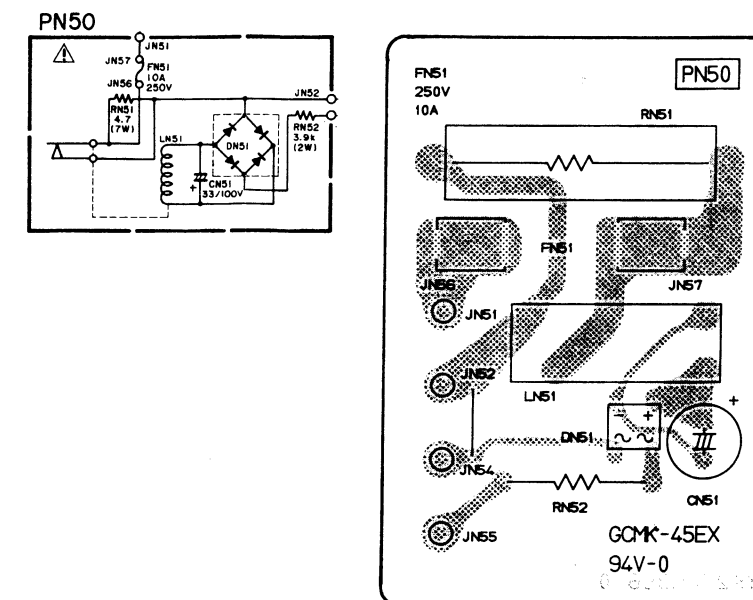


6.5 Phone/Speaker Selector Assembly (PR50) Schematic Diagram and Component Locations

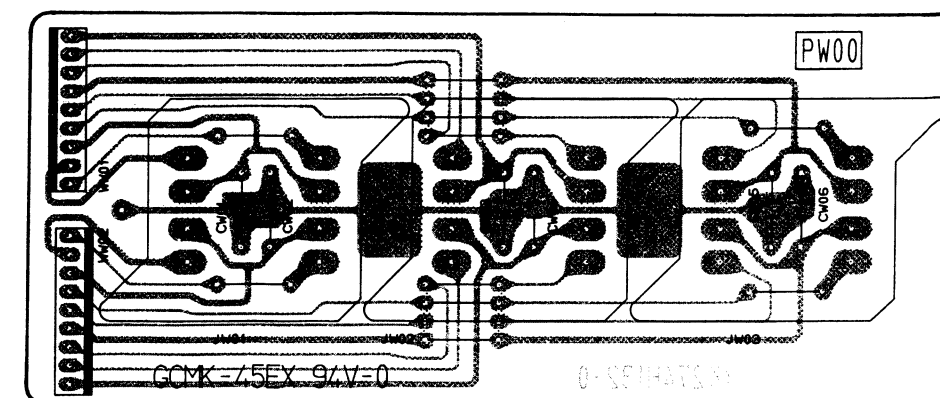
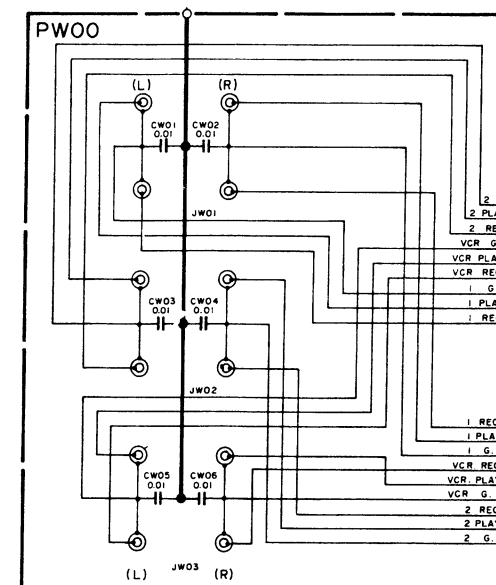




6.8 Soft Start Assembly (PN50) Schematic Diagram and Component Locations

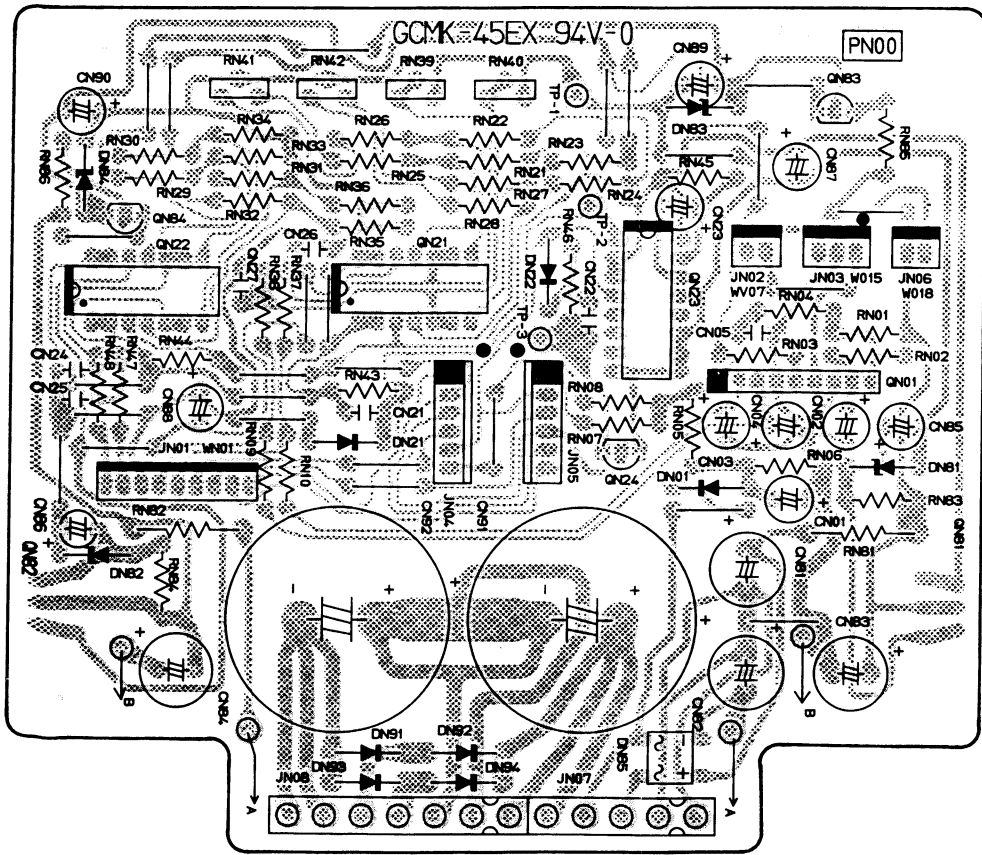
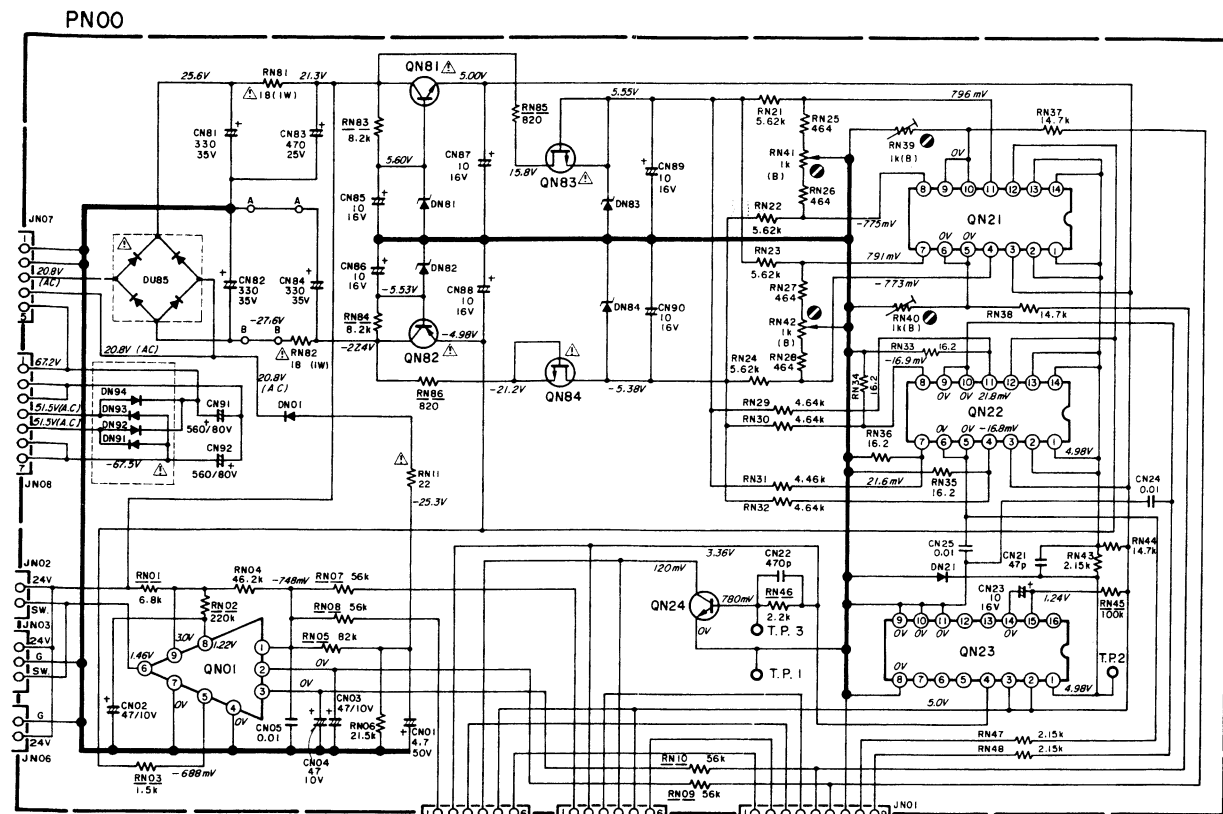


6.9 Tape Play/Rec/VCR Assembly (PW00) Schematic Diagram and Component Locations

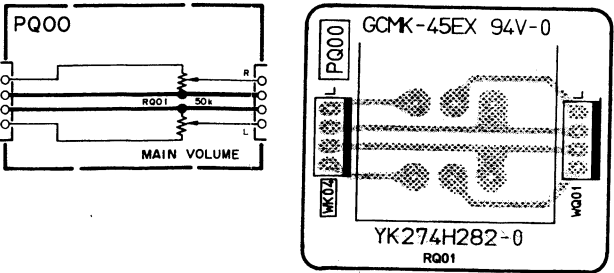


M6150

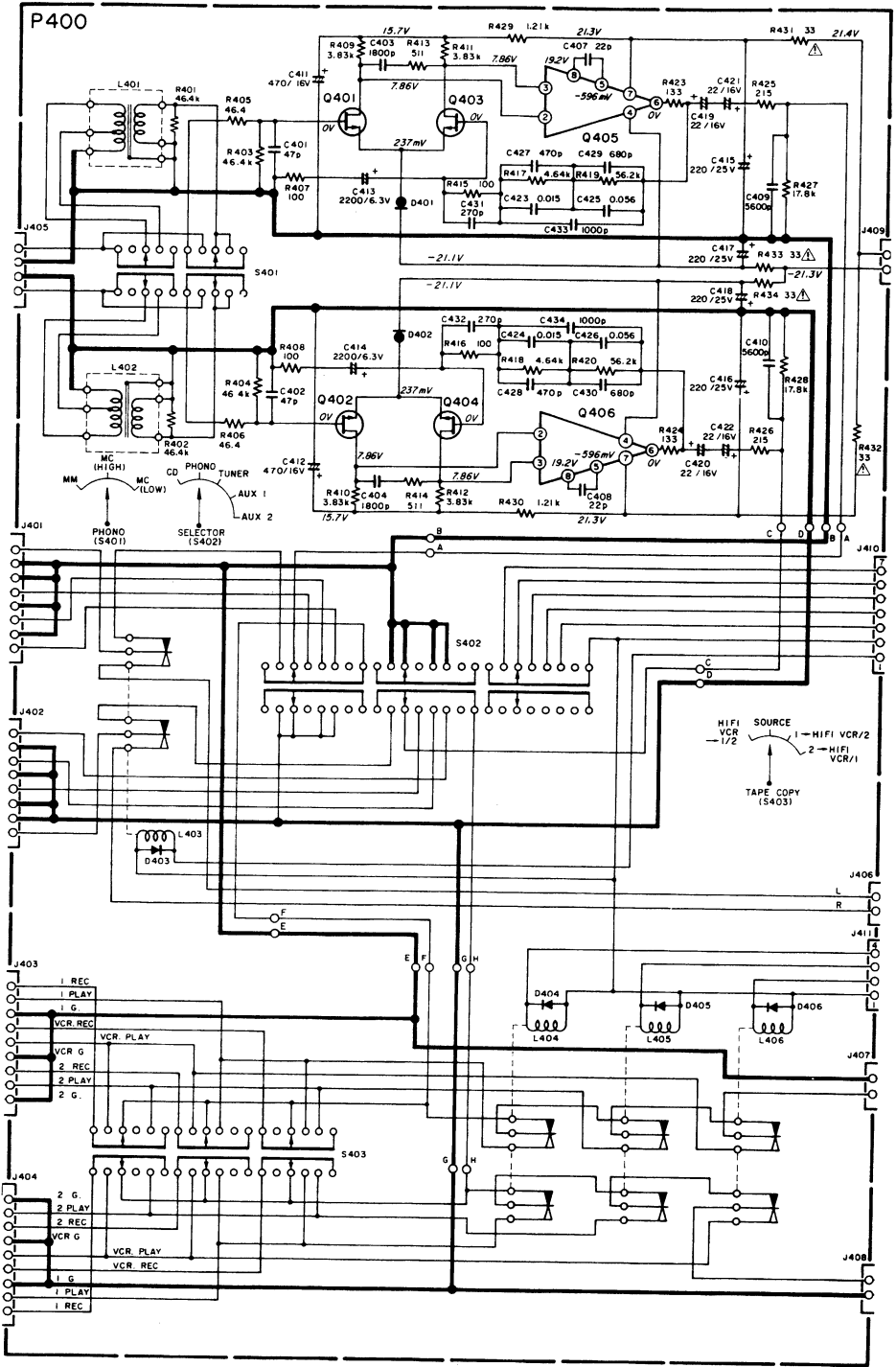
6.10 Comparator/Protec/Supply Assembly (PN00) Schematic Diagram and Component Locations

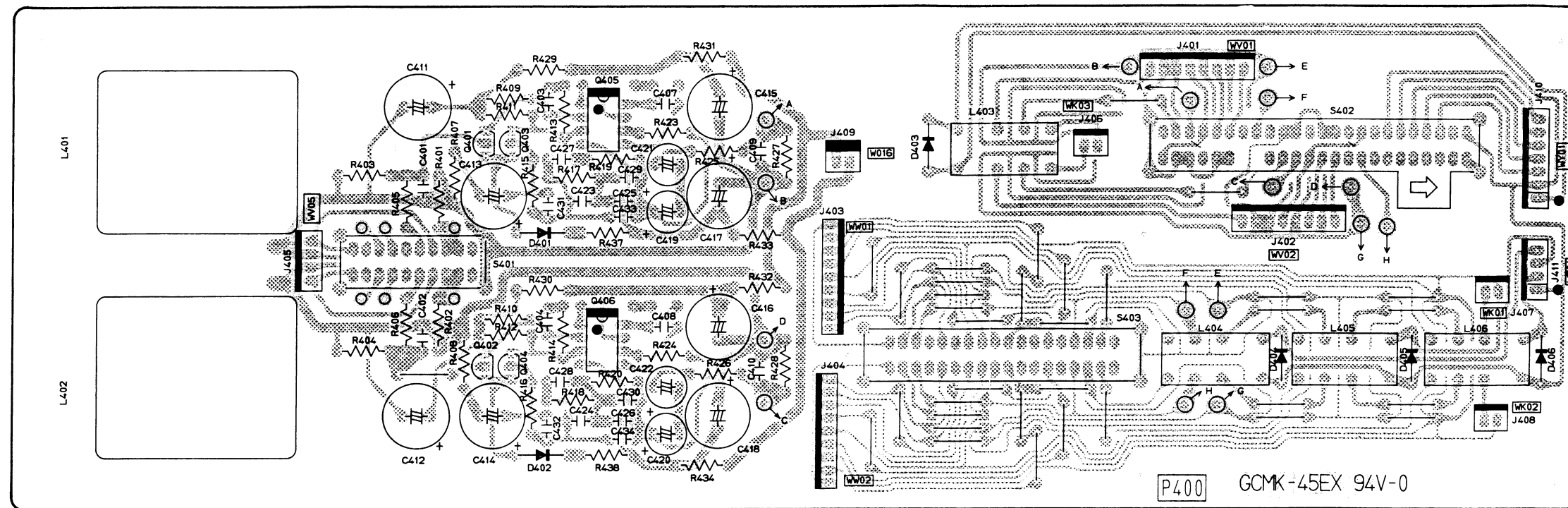


6.11 Main Volume Assembly (PQ00) Schematic Diagram and Component Locations

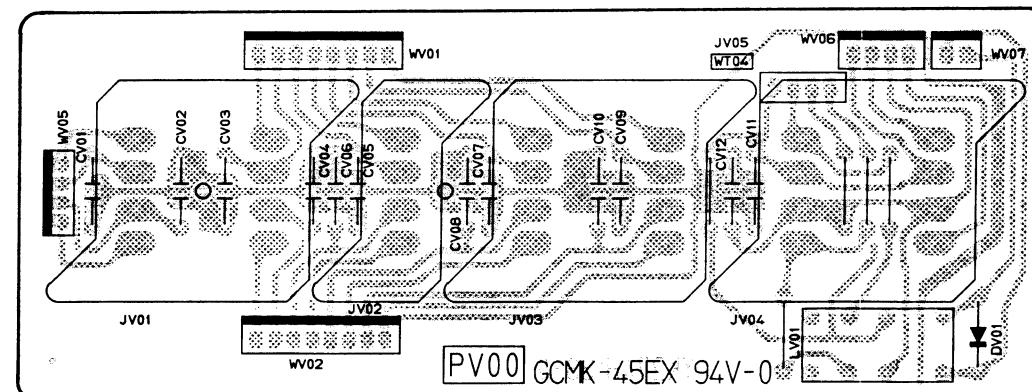
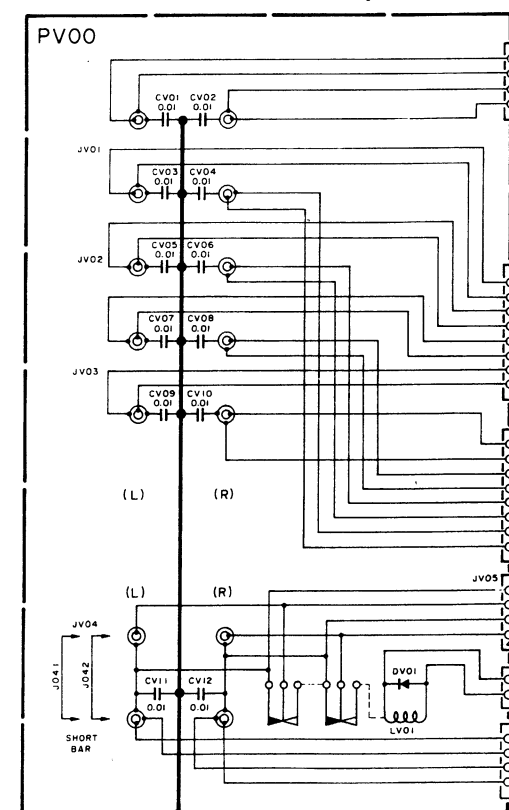


6.12 Phono Amp/Input Selector Assembly (P400) Schematic Diagram and Component Location

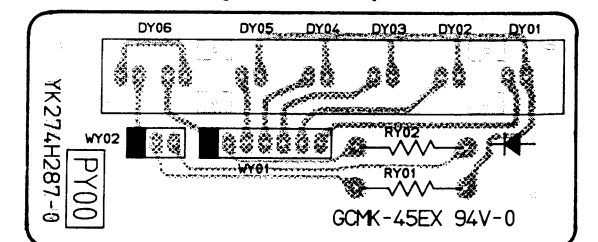
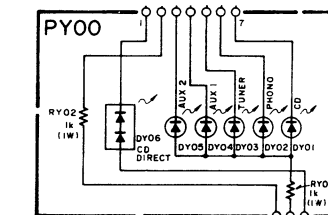




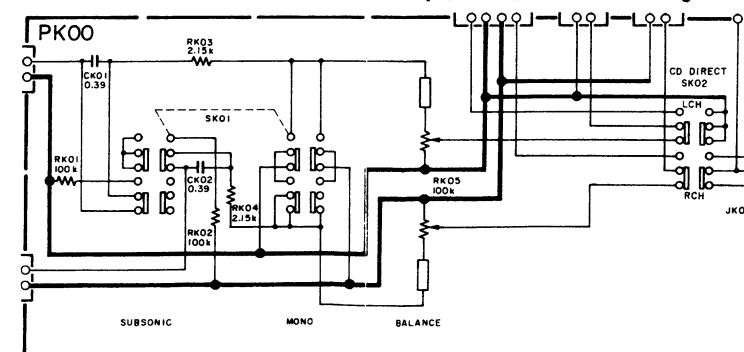
6.13 Function Selector Assembly (PV00) Schematic Diagram and Component Locations

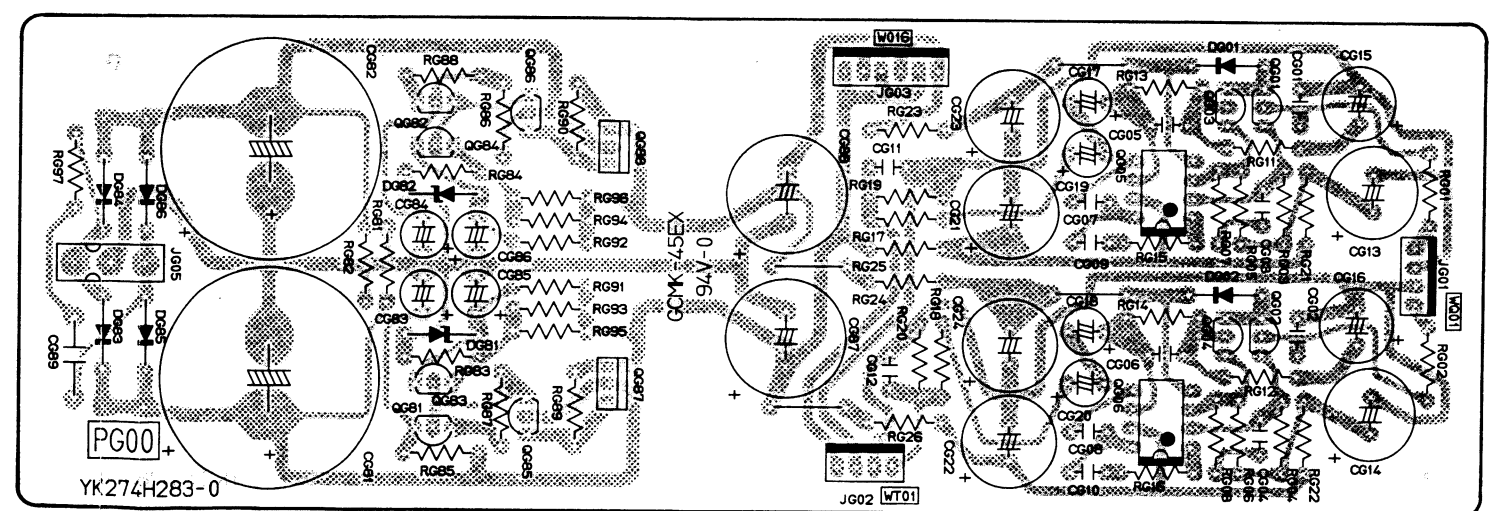
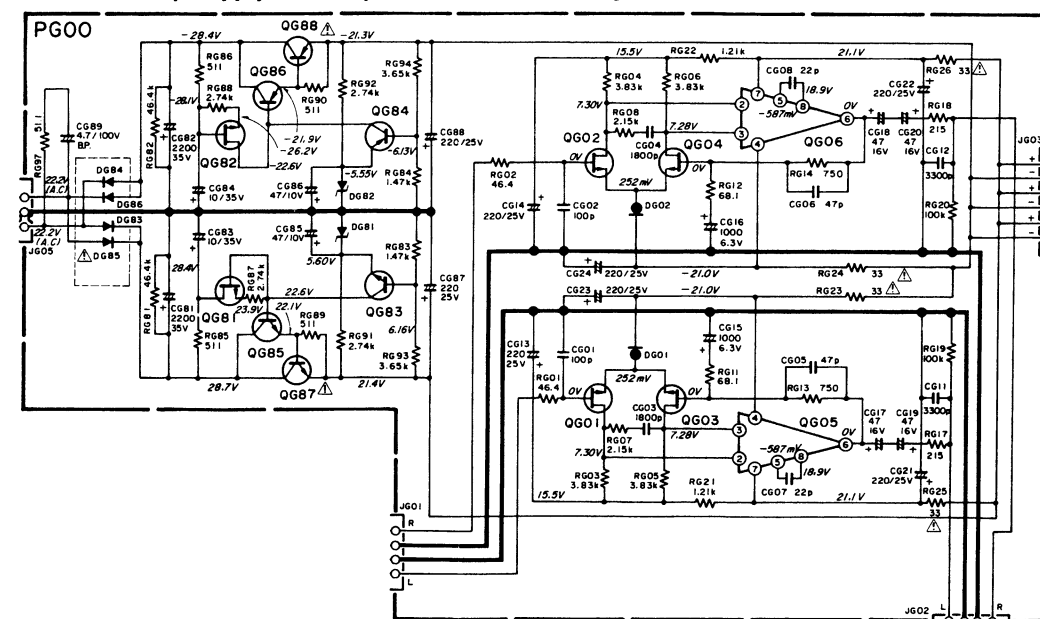


6.14 Function LED Assembly (PY00) Schematic Diagram and Component Locations



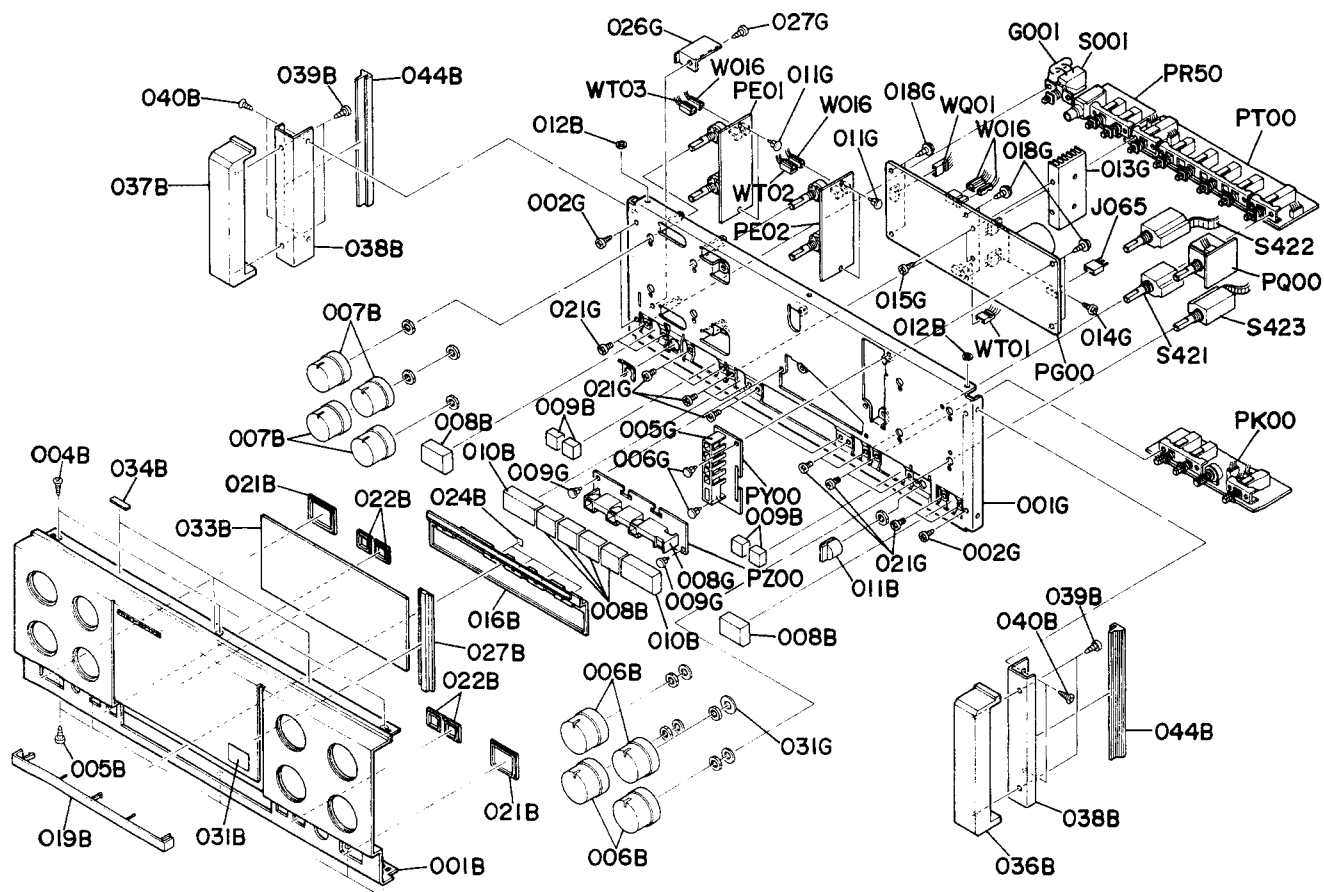
6.15 CD Direct/Balance etc. Assembly (PK00) Schematic Diagram and Component Locations





7. EXPLODED VIEW AND PARTS LIST

•[C01-99] Front Panel and Chassis

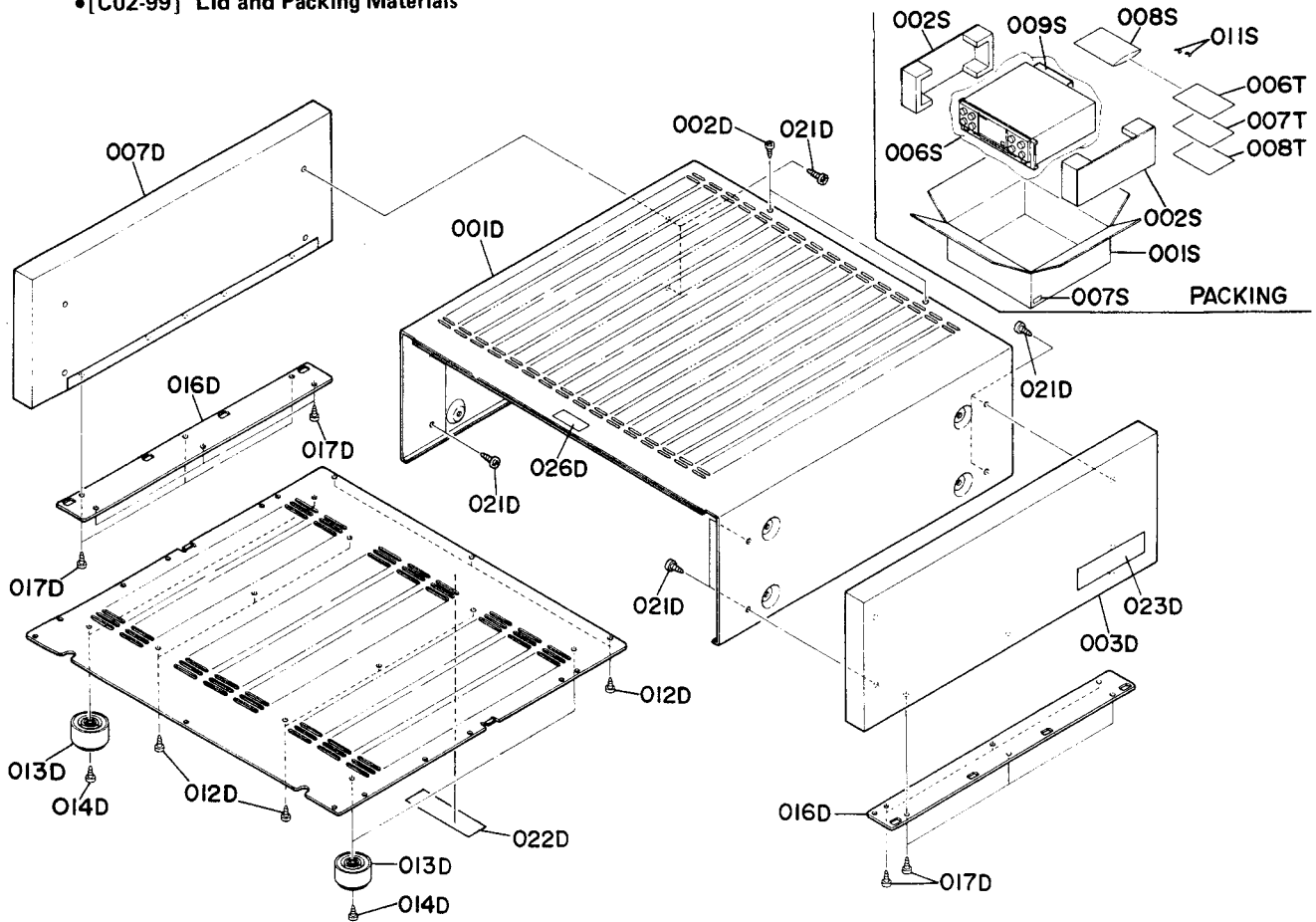


REF. DESIG.	PART NO.	DESCRIPTION
A	274H248400	Front Panel Assembly
001B	274H248510	Front Panel, K
016B	274H259510	Bushing, K
019B	274H053010	Cover, Tape Monitor
021B	242H259120	Bushing, Power/CD Direct
022B	242H259130	Bushing, SPK./Subsonic/Mono
027B	274H158010	Window, Function
031B	274H251010	Badge, MOS FET
033B	274H120030	Insulator
004B	51500308M0	F.H. Taptite Screw F3 x 8
005B	51280306M0	B.H. Tapped Screw B3 x 6
006B	242H154210	Knob, Volume/Function
007B	242H154220	Knob, Tone
008B	242H270110	Button, Power/CD/Tape Monitor
009B	242H270120	Button, SPK./Subsonic/Mono
010B	274H270010	Button, Tone/Muting
011B	263H154130	Knob, Balance
012B	2232118300	Spacer
024B	274H151010	Introducer
034B	032C056010	Buffer
036B	274H063010	Escutcheon, Side (R)
037B	274H063020	Escutcheon, Side (L)
038B	274H160050	Bracket, Side Escutcheon
039B	51280308M0	B.H. Tapped Screw B3 x 8
040B	51280308M0	B.H. Tapped Screw B3 x 8
044B	274H067010	Cap, Side

REF. DESIG.	PART NO.	DESCRIPTION
001G	274H105020	Chassis, Front
002G	51280308M0	B.H. Tapped Screw B3 x 8
005G	274H271010	Holder, Selector LED
006G	2276005050	Clamper, Selector P.W. Board
008G	274H271020	Holder, Tape Monitor LED
009G	2276005050	Clamper, Tape Monitor P.W. Board
011G	2276005050	Clamper, Tone P.W. Board
013G	274H267030	Heatsink, Front P.W. Board
014G	51280308M0	B.H. Tapped Screw B3 x 8
015G	51280306M0	B.H. Tapped Screw B3 x 6
018G	51260306M0	B.T. Screw B3 x 6
021G	51100306M0	B.H.M. Screw B3 x 6
026G	274H109030	Shield, Power Switch
027G	51280308M0	B.H. Tapped Screw B3 x 8
031G	274H012010	Washer, Volume
△ G001	BF10400060	Cap. Composite
△ S001	SP01010820	Push Switch, Power
J065	YJ06001040	Jack, 3P
W016	YB00560030	Connective Cord
WT01	YB00160230	Connective Cord, 4P
WT02	YB00220210	Connective Cord, 3P
WT03	YB00300920	Connective Cord, 3P
WQ01	YB00430020	Connective Cord, 4P
S421	SR04030380	Rotary Switch Assembly, Phono
S422	SR06050230	Rotary Switch Assembly, Selector
S423	SR06040220	Rotary Switch Assembly, Tape COPY

M6154

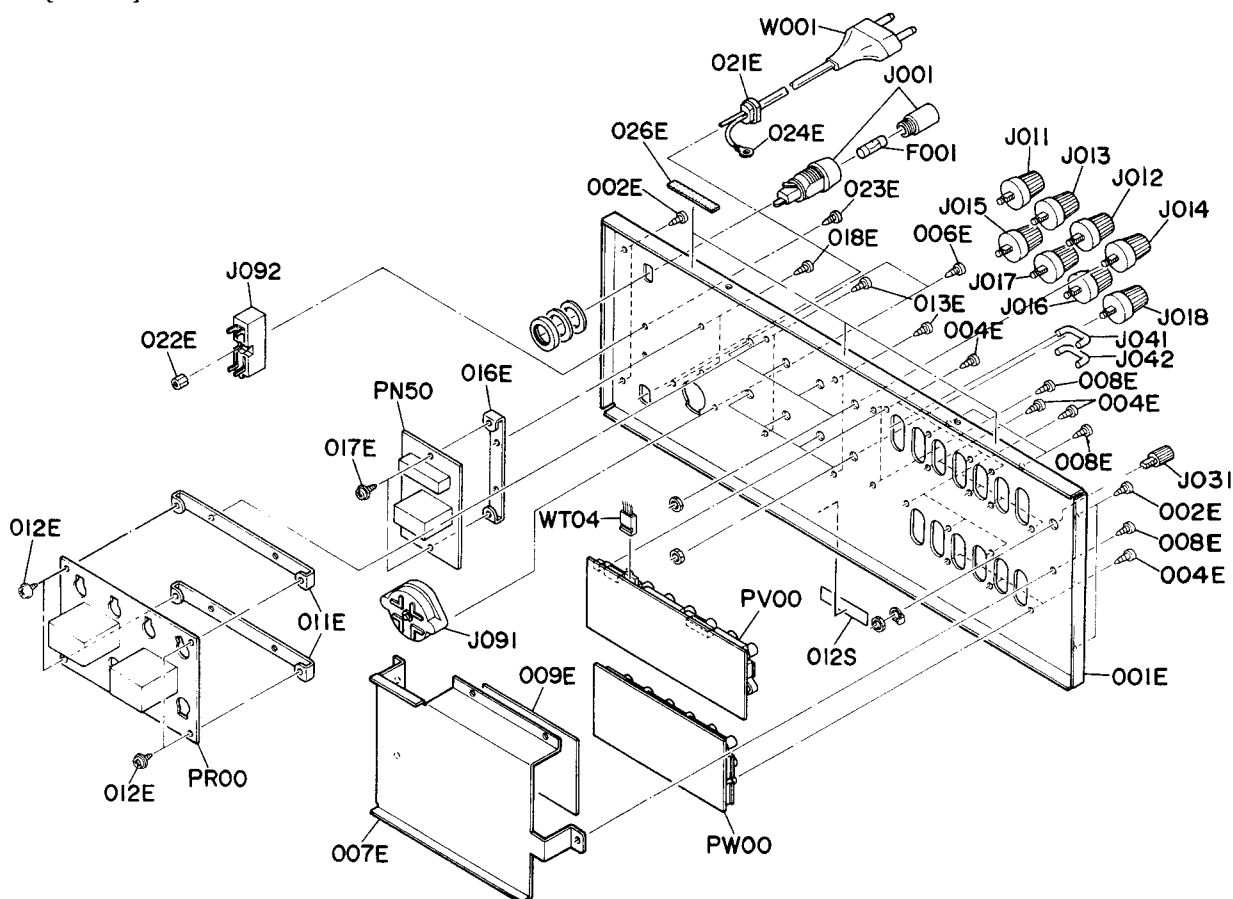
•[C02-99] Lid and Packing Materials



REF. DESIG.	PART NO.	DESCRIPTION
001D	274H257010	Lid, Top Cover
002D	274H010010	Screw
003D	274H249530	Side Panel, Wood (K) [R]
007D	274H249540	Side Panel, Wood (K) [L]
011D	274H257020	Lid, Bottom Cover
012D	51280308M0	B.H. Tapped Screw B3 x 8
013D	238H057010	Leg
014D	51280412M0	B.H. Tapped Screw B4 x 12
016D	274H160070	Bracket
017D	51280308M0	B.H. Tapped Screw B3 x 8
021D	51280412M0	B.H. Tapped Screw B3 x 8
022D	2911861110	Label
023D	2911861140	Label
026D	222H861020	Label, Caution

REF. DESIG.	PART NO.	DESCRIPTION
		PACKING
001S	274H801020	Packing Case
002S	274H809520	Cushion, (K)
006S	9091111030	Polyethylene Sheet
007S	9526019060	Serial No. Card
008S	9012540010	Polyethylene Bag
009S	2864804010	Sleeve
011S	YQ01000020	Shote Plug
006T	274H851310	User Manual
007T	274H851320	User Manual Spec.
008T	274H856010	Circuit Diagram

•[C03-99] Rear Panel

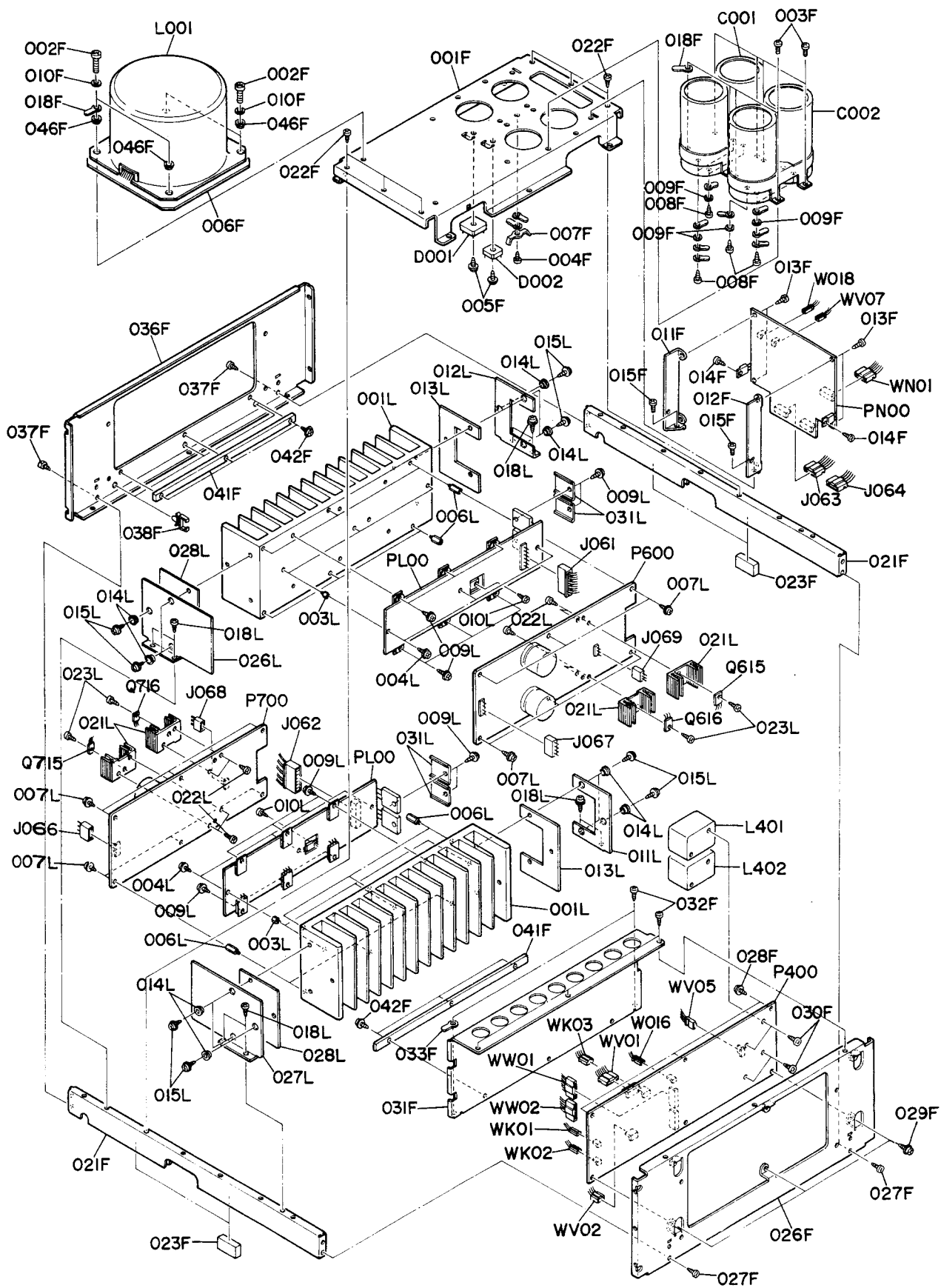


REF. DESIG.	PART NO.	DESCRIPTION
001E	274H250020	Rear Panel
002E	51280308M0	B.H. Tapped Screw B3 x 8
004E	51280308M0	B.H. Tapped Screw B3 x 8
006E	51280308M0	B.H. Tapped Screw B3 x 8
007E	274H109010	Shield
008E	51280308M0	B.H. Tapped Screw B3 x 8
009E	274H120020	Insulator
011E	274H160030	Bracket, Speaker P.W. Board
012E	51480306M0	F. Washer Screw F3 x 6
013E	51100306M0	B.H.M. Screw B3 x 6
016E	274H160040	Bracket, Soft Start P.W. Board
017E	51480306M0	F. Washer Screw F3 x 6
018E	51100306M0	B.H.M. Screw B3 x 6
021E	1455259050	Bushing, AC Power Cord
022E	274H101030	Support
023E	51100306M0	B.H.M. Screw B3 x 6
024E	62030049W0	Lug
026E	2965118010	Spacer
012S	2112265110	Indicator Serial No.

REF. DESIG.	PART NO.	DESCRIPTION
F001	FS10500800	Fuse, 5A
J001	YJ08000290	Jack, Fuse Holder
J011	YT01010100	Terminal, Speaker 1; CH-L(+)
J012	YT01010100	Terminal, Speaker 1; CH-R(+)
J013	YT01010110	Terminal, Speaker 1; CH-L(-)
J014	YT01010110	Terminal, Speaker 1; CH-R(-)
J015	YT01010100	Terminal, Speaker 2; CH-L(+)
J016	YT01010100	Terminal, Speaker 2; CH-R(+)
J017	YT01010110	Terminal, Speaker 2; CH-L(-)
J018	YT01010110	Terminal, Speaker 2; CH-R(-)
J031	YT01010150	Terminal, GND
J041	YQ01000070	Shote Plug
J042	YQ01000070	Shote Plug
J091	BY05080050	Voltage Selector
J092	YL09040020	Terminal
W001	YC01900090	AC Power Cord
WT04	YB00740010	Connective Cord

M6156

•[P01-99] Main Chassis



REF. DESIG.	PART NO.	DESCRIPTION
001F	274H105010	Chassis, Main
002F	51280412M0	B.H. Tapped Screw B4 x 12
003F	51280406M0	B.H. Tapped Screw B4 x 6
004F	51280412M0	B.H. Tapped Screw B4 x 12
005F	51260312M0	B.T. Screw B3 x 12
006F	274H120060	Insulator, Power Transformer
007F	274H123010	Contact, Earth
008F	51100408M0	B.H.M. Screw B4 x 8
009F	274H118010	Spacer
010F	54020401M0	Flat Washer, P.
011F	274H160010	Bracket, (L)
012F	274H160020	Bracket, (R)
013F	51260306M0	B.T. Screw B3 x 6
014F	51280308M0	B.H. Tapped Screw B3 x 8
015F	51280308M0	B.H. Tapped Screw B3 x 8
018F	4220005040	Clamper
021F	274H126010	Stay
022F	51280406M0	B.H. Tapped Screw B4 x 6
023F	100H056010	Buffer
026F	274H105030	Chassis, Side (R)
027F	51280308M0	B.H. Tapped Screw B3 x 8
028F	2276005050	Clamper, Phono Amp P.W. Board
029F	51260306M0	B.T. Screw B3 x 6
030F	51100205E0	B.H.M. Screw B2 x 5
031F	274H109020	Shield, Side
032F	51280308M0	B.H. Tapped Screw B3 x 8
033F	62030049W0	Lug, Earth
036F	274H105040	Chassis, Side (L)
037F	51280308M0	B.H. Tapped Screw B3 x 8
038F	274H005010	Clamper
041F	274H056010	Buffer
042F	51260308M0	B.T. Screw B3 x 8
046F	203H259020	Bushing
001L	274H267010	Heatsink, Main
003L	274H101010	Support, Power Transistor P.W. Board
004L	51480306M0	F. Washer Screw F3 x 6
006L	274H101020	Support, Power Amp P.W. Board
007L	51480306M0	F. Washer Screw F3 x 6
009L	51260312M0	B.T. Screw B3 x 12
010L	51280308M0	B.H. Tapped Screw B3 x 8
011L	274H104010	Retainer, 1; Heatsink
012L	274H104020	Retainer, 2; Heatsink
013L	274H120010	Insulator, 1; Heatsink
014L	223H259020	Bushing
015L	51260312M0	B.T. Screw B3 x 12
018L	51280308M0	B.H. Tapped Screw B3 x 8
021L	274H267020	Heatsink, Transistor
022L	51280308M0	B.H. Tapped Screw B3 x 8
023L	51280308M0	B.H. Tapped Screw B3 x 8
026L	274H104110	Retainer, 3; Heatsink
027L	274H104120	Retainer, 4; Heatsink
028L	274H120020	Insulator, 2; Heatsink
031L	274H053020	Cover, Transistor

REF. DESIG.	PART NO.	DESCRIPTION
△C001	EI18908010	Elect Cap. 18000μF 80V
△C002	EI27905010	Elect Cap. 27000μF 50V
△D001	HE20014290	Diode S10VB-20
△D002	HE20015290	Diode S4VB-20
J061	YB00250330	Connective Cord, 7P
J062	YB00270130	Connective Cord, 7P
J063	YJ06001250	Jack, 5P
J064	YJ06001260	Jack, 7P
J066	YJ06001040	Jack, 3P
J067	YJ06001040	Jack, 3P
J068	YJ06001040	Jack, 3P
J069	YJ06001040	Jack, 3P
△L001	TS40601020	Power Transformer
Q615	HT326823A0	Transistor 2SC2682(P, Q, R)
Q616	HT111423A0	Transistor 2SA1142(P, Q, R)
Q715	HT326823A0	Transistor 2SC2682(P, Q, R)
Q716	HT111423A0	Transistor 2SA1142(P, Q, R)
W016	YB00560030	Connective Cord
W018	YB00600310	Connective Cord, 2P
WK01	YB00280310	Connective Cord, 2P
WK02	YB00240100	Connective Cord, 2P
WK03	YB00230240	Connective Cord, 4P
WN01	YB00220190	Connective Cord, 9P
WV01	YB00400510	Connective Cord, 8P
WV02	YB00480060	Connective Cord, 8P
WV05	YB00140200	Connective Cord, 4P
WV07	YB00180240	Connective Cord, 2P
WW01	YB00340050	Connective Cord, 9P
WW02	YB00280300	Connective Cord, 9P
L401	TI11606010	Input Transformer, CH-L
L402	TI11606010	Input Transformer, CH-R

M6158

8. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R***: (1) GD05 --- 140, Carbon film fixed resistor, $\pm 5\%$, 1/4W

R***: (2) GD05 --- 160, Carbon film fixed resistor, $\pm 5\%$, 1/6W

① — Resistance value

Examples

① Resistance value

0.1 Ω ...001	10 Ω ...100	1k Ω ...102	100k Ω ...104
0.5 Ω ...005	18 Ω ...180	2.7k Ω ...272	680k Ω ...684
1 Ω ...010	100 Ω ...101	10k Ω ...103	1Mk Ω ...105
6.8 Ω ...068	390 Ω ...391	22k Ω ...223	4.7Mk Ω ...475

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C***: CERAMIC CAP.

(1) DD1 --- 370, Ceramic condenser
Disc type
Temp. coeff. P350 ~ N1000, 50V

① ②
Capacity value
Tolerance

Examples

① Tolerance (Capacity deviation)

$\pm 0.25\text{pF}$...0
 $\pm 0.5\text{pF}$...1
 $\pm 5\%$...5

* Tolerance of COMMON PARTS handled here are as follows:

0.5pF ~ 5pF $\pm 0.25\text{pF}$
6pF ~ 10pF $\pm 0.5\text{pF}$
12pF ~ 560pF $\pm 5\%$

② Capacity value

0.5pF...005 3pF...030 100pF...101
1pF...010 10pF...100 220pF...221
1.5pF...015 47pF...470 560pF...561

C***: CERAMIC CAP.

(1) DK16 --- 300, High dielectric constant ceramic condenser
Disc type
Temp. chara. 2B4, 50V

①
Capacity value

Example

② Capacity value
100pF...101 1000pF...102 10000pF...103
470pF...471 2200pF...222

C***: ELECTROLY CAP. (\neq), FILM CAP. (\neq)

(1) EA --- 10, Electrolytic condenser
One-way lead type, Tolerance $\pm 20\%$

① ②
Dielectric strength
Capacity value

Examples

① Capacity value

0.1 μF ...104 4.7 μF ...475 100 μF ...107
0.33 μF ...334 10 μF ...106 330 μF ...337
1 μF ...105 22 μF ...226 1100 μF ...108
2200 μF ...228

② Working voltage

6.3V...006 25V...025
10V...010 35V...035
16V...016 50V...050

(2) DF15 --- 350, Plastic film condenser
One-way type, Mylar $\pm 5\%$ 50V

①
Capacity value

Examples

① Capacity value

0.001 μF (1000pF)...102 0.1 μF ...104
0.0018 μF ...182 0.56 μF ...564
0.01 μF ...103 1 μF ...105
0.015 μF ...153

REF. DESIG.	PART NO.	DESCRIPTION
P400	YK274H1310 ZZ274H8310	P400-PHONO AMP/INPUT SELECTOR CIRCUIT BOARD P.W. Board, Phono Amp/Input Selector P.W. Board Assembly
		P400-CAPACITORS
C401	DF56470520	Film 47pF $\pm 10\%$ 125V
C402	DF56470520	Film 47pF $\pm 10\%$ 125V
C403	OF55182520	Film 1800pF $\pm 5\%$ 125V
C404	OF55182520	Film 1800pF $\pm 5\%$ 125V
C407	DF56220520	Film 22pF $\pm 10\%$ 125V
C408	DF56220520	Film 22pF $\pm 10\%$ 125V
C409	OF15562520	Film 5600pF $\pm 5\%$ 100V
C410	OF15562520	Film 5600pF $\pm 5\%$ 100V
C411	OA47701650	Elect 470 μF 16V
C412	OA47701650	Elect 470 μF 16V
C413	OA22800610	Elect 2200 μF 6.3V
C414	OA22800610	Elect 2200 μF 6.3V
C415	OA22702550	Elect 220 μF 25V
C416	OA22702550	Elect 220 μF 25V
C417	OA22702550	Elect 220 μF 25V
C418	OA22702550	Elect 220 μF 25V
C419	EA22601660	Elect 22 μF 16V
C420	EA22601660	Elect 22 μF 16V
C421	EA22601660	Elect 22 μF 16V
C422	EA22601660	Elect 22 μF 16V
C423	OF15153520	Film 0.015 μF $\pm 5\%$ 100V
C424	OF15153520	Film 0.015 μF $\pm 5\%$ 100V
C425	OF15563520	Film 0.056 μF $\pm 5\%$ 100V
C426	OF15563520	Film 0.056 μF $\pm 5\%$ 100V
C427	DF55471520	Film 470pF $\pm 5\%$ 125V
C428	DF55471520	Film 470pF $\pm 5\%$ 125V
C429	DF55681520	Film 680pF $\pm 5\%$ 125V
C430	DF55681520	Film 680pF $\pm 5\%$ 125V
C431	DF55271520	Film 270pF $\pm 5\%$ 125V
C432	DF55271520	Film 270pF $\pm 5\%$ 125V
C433	OF15102520	Film 1000pF $\pm 5\%$ 100V
C434	OF15102520	Film 1000pF $\pm 5\%$ 100V
		P400-RESISTORS (All Resistors are $\pm 2\%$ and $\frac{1}{4}\text{W}$)
R401	GM21446420	46.4K Ω
R402	GM21446420	46.4K Ω
R403	GM21446420	46.4K Ω
R404	GM21446420	46.4K Ω
R405	GM214464G0	46.4 Ω
R406	GM214464G0	46.4 Ω
R407	GM21410000	100 Ω
R408	GM21410000	100 Ω
R409	GM21438310	3.83K Ω
R410	GM21438310	3.83K Ω
R411	GM21438310	3.83K Ω
R412	GM21438310	3.83K Ω
R413	GM21451100	511 Ω
R414	GM21451100	511 Ω
R415	GM21410000	100 Ω
R416	GM21410000	100 Ω
R417	GM21446410	4.64K Ω
R418	GM21446410	4.64K Ω
R419	GM21456220	56.2K Ω
R420	GM21456220	56.2K Ω

REF. DESIG.	PART NO.	DESCRIPTION
R423	GM21413300	133Ω
R424	GM21413300	133Ω
R425	GM21421500	215Ω
R426	GM21421500	215Ω
R427	GM21417820	17.8KΩ
R428	GM21417820	17.8KΩ
R429	GM21412110	1.21KΩ
R430	GM21412110	1.21KΩ
△ R431	GG05330140	33Ω ±5%
△ R432	GG05330140	33Ω ±5%
△ R433	GG05330140	33Ω ±5%
△ R434	GG05330140	33Ω ±5%
P400-SEMICONDUCTORS		
D401	HD60007100	Diode, C.R. 10YD4.5C
D402	HD60007100	Diode, C.R. 10YD4.5C
D403	HD20011050	Diode 1S1555
D404	HD20011050	Diode 1S1555
D405	HD20011050	Diode 1S1555
D406	HD20011050	Diode 1S1555
Q401	HF203691B0	F.E.T. 2SK369(BL)
Q402	HF203691B0	F.E.T. 2SK369(BL)
Q403	HF203691B0	F.E.T. 2SK369(BL)
Q404	HF203691B0	F.E.T. 2SK369(BL)
Q405	HC10027090	IC 5534D
Q406	HC10027090	IC 5534D
P400-MISCELLANEOUS		
J401	YP01001080	Plug, 8P
J402	YP01001080	Plug, 8P
J403	YP01001090	Plug, 9P
J404	YP01001090	Plug, 9P
J405	YP01001040	Plug, 4P
J406	YP01001020	Plug, 4P
J407	YP01001020	Plug, 4P
J408	YP01001020	Plug, 4P
J409	YP01001980	Plug
J410	YJ07001570	Jack, 4P
J411	YJ07001540	Jack, 4P
L401	TI11606010	Input Transformer, CH-L
L402	TI11606010	Input Transformer, CH-R
L403	LY20240230	Relay
L404	LY20240230	Relay
L405	LY20240230	Relay
L406	LY20240230	Relay
S401	SS04030230	Slide Switch, Phono Select
S402	SS06060100	Slide Switch, Function
S403	SS06040050	Slide Switch, Tape Monitor
P600-POWER AMP., CH-L		
CIRCUIT BOARD		
P600	YK274H3610	P.W. Board, Power Amp; CH-L
	ZZ274H8610	P.W. Board Assembly
P600-CAPACITORS		
C601	OF55101520	Film 100pF ±5% 125V
C602	OF55391520	Film 390pF ±5% 125V
C603	OF56470520	Film 47pF ±10% 125V
C605	OF56050520	Film 5pF ±10% 125V
C606	OA10701650	Elect 100μF 16V
C607	OA22703550	Elect 220μF 35V
C608	OA22703550	Elect 220μF 35V
C609	EB56708010	Elect 560μF 80V
C610	EB56708010	Elect 560μF 80V
C613	OF15102520	Film 1000pF ±5% 100V

REF. DESIG.	PART NO.	DESCRIPTION
C614	OF15102520	Film 1000pF ±5% 100V
C615	OF15222520	Film 0.0022μF ±5% 100V
C616	OA47505010	Elect 4.7μF 50V
P600-RESISTORS		
(All Resistors are ±2% and ¼W)		
R601	GM21410010	1KΩ
R602	GM21426720	26.7KΩ
R603	GM214100G0	10Ω
R604	GM21410010	1KΩ
R605	GM21410020	10KΩ
R606	GM21410020	10KΩ
R607	GM21426720	26.7KΩ
R608	GM21446410	4.64KΩ
R610	GG05010140	1Ω ±5%
R611	GM21456200	562Ω
R612	GM21456200	562Ω
R614	GM21421520	21.5KΩ
R615	GM21412130	121KΩ
R616	GM21446420	46.4KΩ
R617	GG05272140	2.7KΩ ±5%
R618	GG05272140	2.7KΩ ±5%
R619	GM21490900	909Ω
R621	GG05472140	4.7KΩ ±5%
R622	RA02030260	20KΩ(B), Trimming
R623	GG05272140	2.7KΩ ±5%
R624	GG05272140	2.7KΩ ±5%
R625	GG05272140	2.7KΩ ±5%
R626	GG05272140	2.7KΩ ±5%
R627	GG05822140	8.2KΩ ±5%
R628	GG05822140	8.2KΩ ±5%
R629	GG05151140	150Ω ±5%
R630	GG05151140	150Ω ±5%
R631	GG05101140	100Ω ±5%
R632	GG05101140	100Ω ±5%
R633	GG05101140	100Ω ±5%
R634	GG05101140	100Ω ±5%
R637	GM21412130	121KΩ
R638	GM21421510	2.15KΩ
R640	GM21456200	562Ω
R641	GM21411010	1.1KΩ
R642	RA01030720	10KΩ(B), Trimming
R643	RA01030720	10KΩ(B), Trimming
R644	GM21410000	100Ω
R646	GA05151020	150Ω ±5% 2W
R647	GG05470140	47Ω ±5%
R648	GG05470140	47Ω ±5%
R649	GG05102140	1KΩ ±5%
R650	GG05102140	1KΩ ±5%
R651	GG05152140	1.5KΩ ±5%
R652	GG05152140	1.5KΩ ±5%
R655	GG05331140	330Ω ±5%
R656	GG05331140	330Ω ±5%
R657	GG05152140	1.5KΩ ±5%
R658	GG05152140	1.5KΩ ±5%
△ R667	GG05100140	10Ω ±5%
△ R668	GG05100140	10Ω ±5%
R671	BW10000080	0.18Ωx2 ±10% 5W
R672	BW10000080	0.18Ωx2 ±10% 5W
R673	BW10000080	0.18Ωx2 ±10% 5W
R675	GG05562120	5.6KΩ ±5% ½W
R676	GG05562120	5.6KΩ ±5% ½W
R677	GG05332120	3.3KΩ ±5% ½W
R678	GG05332120	3.3KΩ ±5% ½W

MG160

REF. DESIG.	PART NO.	DESCRIPTION
P600-SEMICONDUCTORS		
D601	HD60007100	Diode, CR 10YD4.5C
D602	HD60007100	Diode, CR 10YD4.5C
D603	HD20011050	Diode 1S1555
D604	HD20011050	Diode 1S1555
D605	HD20011050	Diode 1S1555
D606	HD20011050	Diode 1S1555
D609	HD20011050	Diode 1S1555
D610	HD20011050	Diode 1S1555
D611	HD20011050	Diode 1S1555
D612	HD20011050	Diode 1S1555
D613	HD20014010	Diode 1SS81
D614	HD20014010	Diode 1SS81
D615	HD20014010	Diode 1SS81
D616	HD20014010	Diode 1SS81
D617	HD30028010	Zener HZ11A-3L
D618	HD30028010	Zener HZ11A-3L
D619	HD30031010	Zener HZ22L-2
D620	HD20011050	Diode 1S1555
Q601	HF203892A0	F.E.T. 2SK389(GR, BL)
Q602	HT333812A0	Transistor 2SC3381(GR, BL)
Q603	HT322402A0	Transistor 2SC2240(GR, BL)
Q604	HT322402A0	Transistor 2SC2240(GR, BL)
Q605	HT109702A0	Transistor 2SA970(GR, BL)
Q606	HT109702A0	Transistor 2SA970(GR, BL)
Q607	HT109702A0	Transistor 2SA970(GR, BL)
Q608	HT322402A0	Transistor 2SC2240(GR, BL)
Q609	HT109702A0	Transistor 2SA970(GR, BL)
Q610	HT322402A0	Transistor 2SC2240(GR, BL)
Q611	HT11145100	Transistor 2SA1145(O)
Q612	HT32705100	Transistor 2SC2705(O)
Q613	HT11145100	Transistor 2SA1145(O)
Q614	HT32705100	Transistor 2SC2705(O)
Q615	HT326823A0	Transistor 2SC2682(P, Q, R)
Q616	HT111423A0	Transistor 2SA1142(P, Q, R)
Q617	HT318152A0	Transistor 2SC1815(O, Y)
Q618	HT110152A0	Transistor 2SA1015(O, Y)
Q619	HT329092B0	Transistor 2SC2909(S, T)
Q620	HT112072B0	Transistor 2SA1207(S, T)
Q621	HT109702A0	Transistor 2SA970(GR, BL)
Q622	HT329092A0	Transistor 2SC2909(D, E)
Q623	HT322401B0	Transistor 2SC2240(BL)
Q624	HT109701B0	Transistor 2SA970(BL)
Q625	HT322402A0	Transistor 2SC2240(GR, BL)
Q626	HT109702A0	Transistor 2SA970(GR, BL)
Q628	HW10006320	Photo Unit PC-817
P600-MISCELLANEOUS		
J601	YP06001040	Plug, 3P
J602	YP06003540	Plug, 4P
J603	YP06003540	Plug, 4P
J604	YJ06003550	Jack, 6P
J605	YJ06003550	Jack, 6P
J606	YJ07001560	Jack, 6P
J607	YP06001040	Plug, 3P
P600-POWER AMP, CH-R CIRCUIT BOARD		
P700	YK274H3620	P.W. Board, Power Amp; CH-R
	ZZ274H8620	P.W. Board Assembly
P700-CAPACITORS		
C701	OF55101520	Film 100pF $\pm 5\%$ 125V
C702	OF55391520	Film 390pF $\pm 5\%$ 125V
C703	OF56470520	Film 47pF $\pm 10\%$ 125V
C705	OF56050520	Film 5pF $\pm 10\%$ 125V
C706	OA10701650	Elect 100 μ F 16V

REF. DESIG.	PART NO.	DESCRIPTION
C707	OA22703550	Elect 220 μ F 35V
C708	OA22703550	Elect 220 μ F 35V
C709	EB56708010	Elect 560 μ F 80V
C710	EB56708010	Elect 560 μ F 80V
C713	OF15102520	Film 1000pF $\pm 5\%$ 100V
C714	OF15102520	Film 1000pF $\pm 5\%$ 100V
C715	OF15222520	Film 0.0022 μ F $\pm 5\%$ 100V
C716	OA47505010	Elect 4.7 μ F 50V
P700-RESISTORS (All Resistors are $\pm 2\%$ and $\frac{1}{4}W$)		
R701	GM21410010	1K Ω
R702	GM21426720	26.7K Ω
R703	GM214100G0	10 Ω
R704	GM21410010	1K Ω
R705	GM21410020	10K Ω
R706	GM21410020	10K Ω
R707	GM21426720	26.7K Ω
R708	GM21446410	4.64K Ω
R710	GG05010140	1 Ω $\pm 5\%$
R711	GM21456200	562 Ω
R712	GM21456200	562 Ω
R714	GM21421520	21.5K Ω
R715	GM21412130	121K Ω
R716	GM21446420	46.4K Ω
R717	GG05272140	2.7K Ω $\pm 5\%$
R718	GG05272140	2.7K Ω $\pm 5\%$
R719	GM21490900	909 Ω
R721	GG05472140	4.7K Ω $\pm 5\%$
R722	RA02030260	20K Ω (B), Trimming
R723	GG05272140	2.7K Ω $\pm 5\%$
R724	GG05272140	2.7K Ω $\pm 5\%$
R725	GG05272140	2.7K Ω $\pm 5\%$
R726	GG05272140	2.7K Ω $\pm 5\%$
R727	GG05822140	8.2K Ω $\pm 5\%$
R728	GG05822140	8.2K Ω $\pm 5\%$
R729	GG05151140	150 Ω $\pm 5\%$
R730	GG05151140	150 Ω $\pm 5\%$
R731	GG05101140	100 Ω $\pm 5\%$
R732	GG05101140	100 Ω $\pm 5\%$
R733	GG05101140	100 Ω $\pm 5\%$
R734	GG05101140	100 Ω $\pm 5\%$
R737	GM21412130	121K Ω
R738	GM21421510	21.5K Ω
R740	GM21456200	562 Ω
R741	GM21411010	1.1K Ω
R742	RA01030720	10K Ω (B), Trimming
R743	RA01030720	10K Ω (B), Trimming
R744	GM21410000	100 Ω
R746	GA05151020	150 Ω $\pm 5\%$ 2W
R747	GG05470140	47 Ω $\pm 5\%$
R748	GG05470140	47 Ω $\pm 5\%$
R749	GG05102140	1K Ω $\pm 5\%$
R750	GG05102140	1K Ω $\pm 5\%$
R751	GG05152140	1.5K Ω $\pm 5\%$
R752	GG05152140	1.5K Ω $\pm 5\%$
R755	GG05331140	330 Ω $\pm 5\%$
R756	GG05331140	330 Ω $\pm 5\%$
R757	GG05152140	1.5K Ω $\pm 5\%$
R758	GG05152140	1.5K Ω $\pm 5\%$
△ R767	GG05100140	10 Ω $\pm 5\%$

REF. DESIG.	PART NO.	DESCRIPTION
△ R768	GG05100140	10Ω ±5%
R771	BW10000080	0.18Ω×2 ±10% 5W
R772	BW10000080	0.18Ω×2 ±10% 5W
R773	BW10000080	0.18Ω×2 ±10% 5W
R775	GG05562120	5.6KΩ ±5% ½W
R776	GG05562120	5.6KΩ ±5% ½W
R777	GG05332120	3.3KΩ ±5% ½W
R778	GG05332120	3.3KΩ ±5% ½W
P700-SEMICONDUCTORS		
D701	HD60007100	Diode, CR 10YD4.5C
D702	HD60007100	Diode, CR 10YD4.5C
D703	HD20011050	Diode 1S1555
D704	HD20011050	Diode 1S1555
D705	HD20011050	Diode 1S1555
D706	HD20011050	Diode 1S1555
D709	HD20011050	Diode 1S1555
D710	HD20011050	Diode 1S1555
D711	HD20011050	Diode 1S1555
D712	HD20011050	Diode 1S1555
D713	HD20014010	Diode 1SS81
D714	HD20014010	Diode 1SS81
D715	HD20014010	Diode 1SS81
D716	HD20014010	Diode 1SS81
D717	HD30028010	Zener HZ11A-3L
D718	HD30028010	Zener HZ11A-3L
D719	HD30031010	Zener HZ22L-2
D720	HD20011050	Diode 1S1555
Q701	HF203892A0	F.E.T. 2SK389(GR, BL)
Q702	HT333812A0	Transistor 2SC3381(GR, BL)
Q703	HT322402A0	Transistor 2SC2240(GR, BL)
Q704	HT322402A0	Transistor 2SC2240(GR, BL)
Q705	HT109702A0	Transistor 2SA970(GR, BL)
Q706	HT109702A0	Transistor 2SA970(GR, BL)
Q707	HT109702A0	Transistor 2SA970(GR, BL)
Q708	HT322402A0	Transistor 2SC2240(GR, BL)
Q709	HT109702A0	Transistor 2SA970(GR, BL)
Q710	HT322402A0	Transistor 2SC2240(GR, BL)
Q711	HT11145100	Transistor 2SA1145(O)
Q712	HT32705100	Transistor 2SC2705(O)
Q713	HT11145100	Transistor 2SA1145(O)
Q714	HT32705100	Transistor 2SC2705(O)
Q715	HT326823A0	Transistor 2SC2682(P, Q, R)
Q716	HT111423A0	Transistor 2SA1142(P, Q, R)
Q717	HT318152A0	Transistor 2SC1815(O, Y)
Q718	HT110152A0	Transistor 2SA1015(O, Y)
Q719	HT329092B0	Transistor 2SC2909(S, T)
Q720	HT112072B0	Transistor 2SA1207(S, T)
Q721	HT109702A0	Transistor 2SA970(GR, BL)
Q722	HT329092A0	Transistor 2SC2909(D, E)
Q723	HT322401B0	Transistor 2SC2240(BL)
Q724	HT109701B0	Transistor 2SA970(BL)
Q725	HT322402A0	Transistor 2SC2240(GR, BL)
Q726	HT109702A0	Transistor 2SA970(GR, BL)
Q728	HW10006320	Photo Unit PC-817
P700-MISCELLANEOUS		
J701	YP06001040	Plug, 3P
J702	YP06003540	Plug, 4P
J703	YP06003540	Plug, 4P
J704	YJ06003550	Jack, 6P
J705	YJ06003550	Jack, 6P
J706	YJ07001560	Jack, 6P
J707	YP06001040	Plug, 3P

REF. DESIG.	PART NO.	DESCRIPTION
PE01	YK274H2850 ZZ274H2850	PE01-TONE, CH-L CIRCUIT BOARD P.W. Board, Tone; CH-L P.W. Board Assembly PE01-CAPACITORS Elect 4.7μF 35V Elect 4.7μF 35V Film 100pF ±5% 125V Film 100pF ±5% 125V Film 0.01μF ±5% 100V Film 0.01μF ±5% 100V Film 100pF ±5% 100V Film 47pF ±10% 125V Elect 22μF 16V Elect 22μF 16V CE01 EA47503560 CE03 EA47503560 CE05 OF55101520 CE07 OF55101520 CE09 OF15103520 CE11 OF15103520 CE13 OF15102520 CE15 DF56470530 CE17 OA22601610 CE19 OA22601610 CE21 OF15182520 CE23 DF55101530 CE25 OA22702510 CE27 OA22702510 Film 1800pF ±5% 100V Film 100pF ±5% 125V Elect 220μF 25V Elect 220μF 25V PE01-RESISTORS (All Resistors are ±2% and ½W) RE01 GM21410030 100KΩ RE03 GM21410020 10KΩ RE05 GM21446410 4.64KΩ RE07 GM21410020 10KΩ RE09 GM21438320 38.3KΩ RE11 GM21438320 38.3KΩ RE13 GM21410020 10KΩ RE15 GM21410020 10KΩ RE17 GM21410020 10KΩ RE21 GM21421500 215Ω RE23 GM21410030 100KΩ RE25 RK01040280 100KΩ(B), Variable; Bass RE27 RK01040280 100KΩ(B), Variable; Treble △ RE29 GG05152140 1.5KΩ ±5% △ RE31 GG05152140 1.5KΩ ±5% PE01-SEMICONDUCTOR IC 4560DD PE01-MISCELLANEOUS Plug, 3P Plug, 2P PE02-TONE, CH-R CIRCUIT BOARD P.W. Board, Tone; CH-R P.W. Board Assembly PE02-CAPACITORS Elect 4.7μF 35V Elect 4.7μF 35V Film 100pF ±5% 125V Film 100pF ±5% 125V Film 0.01μF ±5% 100V Film 0.01μF ±5% 100V Film 100pF ±5% 100V Film 47pF ±10% 125V Elect 22μF 16V Elect 22μF 16V CE02 EA47503560 CE04 EA47503560 CE06 OF55101520 CE08 OF55101520 CE10 OF15103520 CE12 OF15103520 CE14 OF15102520 CE16 DF56470530 CE18 OA22601610 CE20 OA22601610

M6162

REF. DESIG.	PART NO.	DESCRIPTION			
CE22	OF15182520	Film	1800pF	±5%	100V
CE24	DF55101530	Film	100pF	±5%	125V
CE26	OA22702510	Elect	220μF		25V
CE28	OA22702510	Elect	220μF		25V
PE02-RESISTORS (All Resistors are ±2% and ¼W)					
RE02	GM21410030		100KΩ		
RE04	GM21410020		10KΩ		
RE06	GM21446410		4.64KΩ		
RE08	GM21410020		10KΩ		
RE10	GM21438320		38.3KΩ		
RE12	GM21438320		38.3KΩ		
RE14	GM21410020		10KΩ		
RE16	GM21410020		10KΩ		
RE18	GM21410020		10KΩ		
RE22	GM21421500		215Ω		
RE24	GM21410030		100KΩ		
RE26	RK01040280		100KΩ(B), Variable; Bass		
RE28	RK01040280		100KΩ(B), Variable; Treble		
Δ RE30	GG05152140		1.5KΩ	±5%	
Δ RE32	GG05152140		1.5KΩ	±5%	
PE02-SEMICONDUCTOR					
QE02	HC10021090	IC	4560DD		
PE02-MISCELLANEOUS					
JE02	YP01001030	Plug, 3P			
JE04	YP10001980	Plug, 2P			
PG00-FLAT AMP/SUPPLY CIRCUIT BOARD					
PG00	YK274H2830	P.W. Board, Flat Amp/Supply			
	ZZ274H8830	P.W. Board Assembly			
PG00-CAPACITORS					
CG01	OF55101520	Film	100pF	±5%	125V
CG02	OF55101520	Film	100pF	±5%	125V
CG03	OF55182520	Film	1800pF	±5%	125V
CG04	OF55182520	Film	1800pF	±5%	125V
CG05	OF56470520	Film	47pF	±10%	125V
CG06	OF56470520	Film	47pF	±10%	125V
CG07	OF56220520	Film	22pF	±10%	125V
CG08	OF56220520	Film	22pF	±10%	125V
CG11	OF15332520	Film	3300pF	±5%	100V
CG12	OF15332520	Film	3300pF	±5%	100V
CG13	OA22702510	Elect	220μF		25V
CG14	OA22702510	Elect	220μF		25V
CG15	OA10800610	Elect	1000μF		6.3V
CG16	OA10800610	Elect	1000μF		6.3V
CG17	OA47602550	Elect	47μF		25V
CG18	OA47602550	Elect	47μF		25V
CG19	OA47602550	Elect	47μF		25V
CG20	OA47602550	Elect	47μF		25V
CG21	OA22702550	Elect	220μF		25V
CG22	OA22702550	Elect	220μF		25V
CG23	OA22702550	Elect	220μF		25V
CG24	OA22702550	Elect	220μF		25V
CG81	EB22803560	Elect	2200μF		35V
CG82	EB22803560	Elect	2200μF		35V
CG83	OA10603510	Elect	10μF		35V
CG84	OA10603510	Elect	10μF		35V
CG85	OA47601010	Elect	47μF		10V
CG86	OA47601010	Elect	47μF		10V
CG87	OA22702550	Elect	220μF		25V
CG88	OA22702550	Elect	220μF		25V
CG89	EQ47510030	Elect	4.7μF		100V

REF. DESIG.	PART NO.	DESCRIPTION	
PG00-RESISTORS (All Resistors are ±2% and ¼W)			
RG01	GM214464G0	46.4Ω	
RG02	GM214464G0	46.4Ω	
RG03	GM21438310	3.83KΩ	
RG04	GM21438310	3.83KΩ	
RG05	GM21438310	3.83KΩ	
RG06	GM21438310	3.83KΩ	
RG07	GM21421510	2.15KΩ	
RG08	GM21421510	2.15KΩ	
RG11	GM214681G0	68.1Ω	
RG12	GM214681G0	68.1Ω	
RG13	GM21475000	750Ω	
RG14	GM21475000	750Ω	
RG17	GM21421500	215Ω	
RG18	GM21421500	215Ω	
RG19	GM21410030	100KΩ	
RG20	GM21410030	100KΩ	
RG21	GM21412110	1.21KΩ	
RG22	GM21412110	1.21KΩ	
Δ RG23	GG05330140	33Ω	±5%
Δ RG24	GG05330140	33Ω	±5%
Δ RG25	GG05330140	33Ω	±5%
Δ RG26	GG05330140	33Ω	±5%
RG81	GM21446420	46.4KΩ	
RG82	GM21446420	46.4KΩ	
RG83	GM21414710	1.47KΩ	
RG84	GM21414710	1.47KΩ	
RG85	GM21451100	511Ω	
RG86	GM21451100	511Ω	
RG87	GM21427410	2.74KΩ	
RG88	GM21427410	2.74KΩ	
RG89	GM21451100	511Ω	
RG90	GM21451100	511Ω	
RG91	GM21427410	2.74KΩ	
RG92	GM21427410	2.74KΩ	
RG93	GM21436510	3.65KΩ	
RG94	GM21436510	3.65KΩ	
RG97	GA05560010	56Ω	
PG00-SEMICONDUCTORS			
DG01	HD60007100	Diode, CR	10YD4.5C
DG02	HD60007100	Diode, CR	10YD4.5C
DG81	HD30021010	Zener	HZ6A-3L
DG82	HD30021010	Zener	HZ6A-3L
Δ DG83	HD20028080	Diode	EP01Z
Δ DG84	HD20028080	Diode	EP01Z
Δ DG85	HD20028080	Diode	EP01Z
Δ DG86	HD20028080	Diode	EP01Z
QG01	HF203691B0	F.E.T.	2SK369(BL)
QG02	HF203691B0	F.E.T.	2SK369(BL)
QG03	HF203691B0	F.E.T.	2SK369(BL)
QG04	HF203691B0	F.E.T.	2SK369(BL)
QG05	HC10027090	IC	5534D
QG06	HC10027090	IC	5534D
QG81	HF202461C0	F.E.T.	2SK246(GR)
QG82	HF202461C0	F.E.T.	2SK246(GR)
QG83	HT318151B0	Transistor	2SC1815(Y)
QG84	HT110151B0	Transistor	2SA1015(Y)
QG85	HT318151B0	Transistor	2SC1815(Y)
QG86	HT110151B0	Transistor	2SA1015(Y)
Δ QG87	HT334222A0	Transistor	2SC3422(O, Y)
Δ QG88	HT113592A0	Transistor	2SA1359(O, Y)

REF. DESIG.	PART NO.	DESCRIPTION
JG01 JG02 JG05	YP01001040 YP01001040 YP06001040	PG00-MISCELLANEOUS Plug, 4P Plug, 4P Plug, 3P
PK00	YK274H2810 ZZ274H8810	PK00-SUB/MONO/BALANCE/ CD DIRECT CIRCUIT BOARD P.W. Board, Sub/Mono/Balance/CD Direct P.W. Board Assembly
CK01 CK02	OF15394010 OF15394010	PK00-CAPACITORS Film 0.39 μ F \pm 5% Film 0.39 μ F \pm 5%
RK01 RK02 RK03 RK04 RK05	GM21410030 GM21410030 GM21421510 GM21421510 RM01040890	PK00-RESISTORS 100K Ω \pm 2% $\frac{1}{4}$ W 100K Ω \pm 2% $\frac{1}{4}$ W 2.15K Ω \pm 2% $\frac{1}{4}$ W 2.15K Ω \pm 2% $\frac{1}{4}$ W 100K Ω , Variable; Balance
JK01	YJ07001530	PK00-MISCELLANEOUS Jack, 3P
SK01 SK02	SP04020470 SP04010500	Push Switch, Subsonic/Mono Push Switch, CD Direct
WK01 WK02 WK03 WK04	YB00280310 YB00240100 YB00230240 YB00150510	Connective Cord, 2P Connective Cord, 2P Connective Cord, 4P Connective Cord, 4P
PL00	YF274H0010 ZZ274H0010	PL00-POWER TRANSISTOR CIRCUIT BOARD P.W. Board, Power Transistor P.W. Board Assembly
Δ CL01 Δ CL02	DF16105540 DF16105540	PL00-CAPACITORS Film 1 μ F \pm 10% 100V Film 1 μ F \pm 10% 100V
Δ RL01 Δ RL02 Δ RL03 Δ RL04 Δ RL05 Δ RL06 Δ RL07 Δ RL08	NH05221140 NH05221140 NH05221140 NH05101140 NH05101140 NH05101140 GG05068140 GG05068140	PL00-RESISTORS (All Resistors are \pm 5% and $\frac{1}{4}$ W) 220 Ω , Fusible 220 Ω , Fusible 220 Ω , Fusible 100 Ω , Fusible 100 Ω , Fusible 100 Ω , Fusible 6.8 Ω 6.8 Ω
Δ DL01 Δ DL02	HD20027100 HD20027100	PL00-SEMICONDUCTORS Diode 30DF-2 Diode 30DF-2
Δ QL01 Δ QL02 Δ QL03 Δ QL04 Δ QL05 Δ QL06 Δ QL07 Δ QL08 Δ QL09 Δ QL10 Δ QL11	HF20405100 HF20405100 HF20405100 HF10115100 HF10115100 HF10115100 HT332802A0 HT113012A0 HT329832A0 HT112252A0 HT334191Y0	F.E.T. 2SK405(O) F.E.T. 2SK405(O) F.E.T. 2SK405(O) F.E.T. 2SJ115(O) F.E.T. 2SJ115(O) F.E.T. 2SJ115(O) Transistor 2SC3280(R, O) Transistor 2SA1301(R, O) Transistor 2SC2983(O, Y) Transistor 2SA1225(O, Y) Transistor 2SC3419(Y)

REF. DESIG.	PART NO.	DESCRIPTION
JL01 JL02 JL03 JL04 JL05	YP06003560 YP06003540 YP06003540 YP06003550 YP06003550	PL01-MISCELLANEOUS Plug, 7P Plug, 4P Plug, 4P Plug, 6P Plug, 6P
PN00	YK274H3630 ZZ274H8630	PN00-COMPARATOR/PROTECTOR/ SUPPLY CIRCUIT BOARD P.W. Board, Comparator/Protector/ Supply P.W. Board Assembly
CN01 CN02 CN03 CN04 CN05 CN21 CN22 CN23 CN24 CN25	OA47505010 OA47601010 OA47601010 OA47601010 OF15103520 DF56470530 OF15471520 OA10601610 OF15103520 OF15103520	PN00-CAPACITORS Elect 4.7 μ F 50V Elect 47 μ F 10V Elect 47 μ F 10V Elect 47 μ F 10V Film 0.01 μ F \pm 5% 100V Film 47pF \pm 10% 125V Film 470pF \pm 5% 100V Elect 10 μ F 16V Film 0.01 μ F \pm 5% 100V Film 0.01 μ F \pm 5% 100V
CN81 CN82 CN83 CN84 CN85 CN90 CN91 CN92	OA33703510 OA33703510 OA47702510 OA33703510 OA10601610 EB56708010 EB56708010	Elect 330 μ F 35V Elect 330 μ F 35V Elect 470 μ F 25V Elect 330 μ F 35V Elect 10 μ F 16V Elect 560 μ F 80V Elect 560 μ F 80V
RN04 RN06 Δ RN11 RN21 RN22 RN23 RN24 RN25 RN26 RN27 RN28 RN29 RN30 RN31 RN32 RN33 RN34 RN35 RN36 RN37 RN38 RN39 RN40 RN41 RN42 RN43 RN44 RN47 RN48 Δ RN81 Δ RN82	GM21446420 GM21421520 NH05220140 GM21456210 GM21456210 GM21456210 GM21456210 GM21456210 GM21446400 GM21446400 GM21446400 GM21446410 GM21446410 GM21446410 GM21446410 GM214162G0 GM214162G0 GM214162G0 GM214162G0 GM214162G0 GM21414720 GM21414720 RA01020460 RA01020460 RA01020460 RA01020460 GM21421510 GM21414720 GG05222140 GG05222140 GA05022010 GA05180010	(All Resistors are \pm 2% and $\frac{1}{4}$ W) 46.4K Ω 21.5K Ω 22 Ω \pm 5%, Fusible 5.62K Ω 5.62K Ω 5.62K Ω 5.62K Ω 5.62K Ω 464 Ω 464 Ω 464 Ω 4.64K Ω 4.64K Ω 4.64K Ω 4.64K Ω 16.2 Ω 16.2 Ω 16.2 Ω 16.2 Ω 16.2 Ω 14.7K Ω 14.7K Ω 1K Ω (B), Trimming 1K Ω (B), Trimming 1K Ω (B), Trimming 1K Ω (B), Trimming 2.15K Ω 14.7K Ω 2.2K Ω 2.2K Ω 2.2 Ω \pm 5% 1W 18 Ω \pm 5% 1W

REF. DESIG.	PART NO.	DESCRIPTION
PN00-SEMICONDUCTORS		
DN01	HD20016210	Diode 1SR35-200A
DN21	HD20011050	Diode 1S1555
DN81	HD30021010	Zener HZ6A-3L
DN82	HD30021010	Zener HZ6A-3L
DN83	HD30021010	Zener HZ6A-3L
DN84	HD30021010	Zener HZ6A-3L
△ DN85	HE20002030	Diode DBB10B
△ DN91	HD20028080	Diode EP01Z
△ DN92	HD20028080	Diode EP01Z
△ DN93	HD20028080	Diode EP01Z
△ DN94	HD20028080	Diode EP01Z
QN01	HC10042050	IC TA731PA
QN21	HC10009090	IC NJM2901
QN22	HC10009090	IC NJM2901
QN23	HC712301A0	IC HD74LS123
QN24	HT318151B0	Transistor 2SC1815(Y)
△ QN81	HT334222A0	Transistor 2SC3422(O, Y)
△ QN82	HT113592A0	Transistor 2SA1359(O, Y)
△ QN83	HF202461D0	F.E.T. 2SK246(BL)
△ QN84	HF202461D0	F.E.T. 2SK246(BL)
PN00-MISCELLANEOUS		
JN01	YP01001090	Plug, 9P
JN02	YP01001980	Plug, 2P
JN03	YJ07001530	Jack, 3P
JN06	YP10001980	Plug, 2P
JN07	YP06000580	Plug, 5P
JN08	YP06000590	Plug, 7P
WN04	YU06180260	Jumper Lead, 6P
WN05	YU06180260	Jumper Lead, 6P
PN50-SOFT START CIRCUIT BOARD		
PN50	YK274H3660	P.W. Board, Soft Start
△ CN51	ZZ274H8660	P.W. Board Assembly
	OA33610010	Elect Cap. 33μF 100V
△ RN51	GR05047080	Resistor 4.7Ω ±5% 7W
△ RN52	GA05472020	Resistor 4.7KΩ ±5% 2W
△ DN51	HE20004030	Diode DBB10C
△ FN51	FS11000600	Fuse 10A 250V
JN56	YJ08000170	Jack, Fuse Holder
JN57	YJ08000170	Jack, Fuse Holder
△ LN51	LY10480030	Relay
PQ00-MAIN VOLUME CIRCUIT BOARD		
PQ00	YK274H2820	P.W. Board, Main Volume
RQ01	ZZ274H8820	P.W. Board Assembly
	RM05031210	Variable Resistor 50KΩ
WQ01	YB00430020	Connective Cord, 4P
PR00-SPEAKER/MUTING RELAY CIRCUIT BOARD		
PR00	YK274H3650	P.W. Board, Speaker/Muting Relay
PR00-CAPACITORS		
CR01	DF16104510	Film 0.1μF ±10% 200V
CR02	DF16104510	Film 0.1μF ±10% 200V

REF. DESIG.	PART NO.	DESCRIPTION
PR00-RESISTORS		
RR01	GA05100030	10Ω ±5% 3W
RR02	GA05100030	10Ω ±5% 3W
RR03	GG05022120	2.2Ω ±5% ¼W
RR04	GG05022120	2.2Ω ±5% ¼W
RR05	GA05331020	330Ω ±5% 2W
RR06	GA05331020	330Ω ±5% 2W
PR00-SEMICONDUCTORS		
DR01	HD20011050	Diode 1S1555
DR02	HD20011050	Diode 1S1555
PR00-MISCELLANEOUS		
JR01	YP06001040	Plug, 3P
JR02	YP06001040	Plug, 3P
JR03	YB00060110	Connective Cord, 1P
JR04	YB00170140	Connective Cord, 1P
JR05	YB00170150	Connective Cord, 1P
JR06	YB00060100	Connective Cord, 1P
JR07	YB00060090	Connective Cord, 1P
JR08	YB00150490	Connective Cord, 1P
JR09	YB00150490	Connective Cord, 1P
JR10	YB00060090	Connective Cord, 1P
JR11	YJ07001550	Jack, 5P
LR01	LY20240150	Relay, Speaker
LR02	LY20240150	Relay, Speaker
LR03	LJ31115080	Coil, Output
LR04	LJ31115080	Coil, Output
WN01	YB00220190	Connective Cord, 9P
PR50-PHONE/SPEAKER SELECT CIRCUIT BOARD		
PR50	YK274H3640	P.W. Board, Phone/Speaker Select
	ZZ274H8640	P.W. Board Assembly
RR51	GA05102010	Resistor 1KΩ ±5% 1W
RR52	GA05102010	Resistor 1KΩ ±5% 1W
JR51	YJ01002080	Jack, Phone
SR51	SP02020860	Push Switch, Speaker Select
PT00-TONE/TAPE 1, 2/VCR/MUTING CIRCUIT BOARD		
PT00	YK274H2840	P.W. Board, Tone/Tape 1, 2/VCR/Muting
PT00-RESISTORS		
RT01	GM21421510	2.15KΩ ±2% ¼W
RT02	GM21421510	2.15KΩ ±2% ¼W
RT03	GM21421500	215Ω ±2% ¼W
RT04	GM21421500	215Ω ±2% ¼W
RT05	GA05102010	1KΩ ±5% 1W
RT06	GA05102010	1KΩ ±5% 1W
RT07	GA05102010	1KΩ ±5% 1W
PT00-MISCELLANEOUS		
JT01	YP06001040	Plug, 3P
JT02	YJ07001550	Jack, 5P
ST01	SP04010480	Push Switch, Muting
ST02	SP02040330	Push Switch, Tape 1, 2/VCR
ST03	SP04010480	Push Switch, Tone Defeat
WT01	YB00160230	Connective Cord, 4P
WT02	YB00220210	Connective Cord, 3P
WT03	YB00300920	Connective Cord, 3P
WT04	YB00740010	Connective Cord, 8P

REF. DESIG.	PART NO.	DESCRIPTION
PV00	YK274H1320 ZZ274H8320	PV00-PHONO/CD/TUNER/AUX 1, 2 CIRCUIT BOARD P.W. Board, Phono/CD/Tuner/AUX 1, 2 P.W. Board Assembly
CV01 ? CV12	DA17103010	PV00-CAPACITORS Ceramic 0.01 μ F \pm 20% 25V
DV01	HD20011050	PV00-SEMICONDUCTORS Diode 1S1555
JV01 JV02 JV03 JV04 JV05	YT02040570 YT02020470 YT02040580 YT02040580 YP06002010	PV00-MISCELLANEOUS Terminal, Phono/CD Terminal, Tuner Terminal, AUX 1, AUX 2 Terminal, Pri-OUT/Main-IN Plug, 4P
LV01	LY20240230	Relay, Pri-OUT
WV01 WV02 WV05 WV06 WV07	YB00400510 YB00480060 YB00140200 YB00670010 YB00180240	Connective Cord, 8P Connective Cord, 8P Connective Cord, 4P Connective Cord, 4P Connective Cord, 2P
PW00	YK274H1330 ZZ274H8330	PW00-TAPE PLAY/REC/VCR CIRCUIT BOARD P.W. Board, Tape Play/Rec/VCR P.W. Board Assembly
CW01 ? CW06	DA17103010	Ceramic Cap. 0.01 μ F \pm 20% 25V
JW01 JW02 JW03	YT02040580 YT02040580 YT02040580	Terminal, Tape 1 Terminal, Tape 2 Terminal, HIFI VCR
WW01 WW02	YB00340050 YB00280300	Connective Cord, 9P Connective Cord, 9P

PY00	YK274H2870 ZZ274H8870	PY00-FUNCTION IND. CIRCUIT BOARD P.W. Board, Function IND. P.W. Board Assembly
RY01 RY02	GA05102010 GA05102010	Resistor 1K Ω \pm 5% 1W Resistor 1K Ω \pm 5% 1W
DY01 DY02 DY03 DY04 DY05 DY06	HI10048320 HI10048320 HI10048320 HI10048320 HI10048320 HI10037320	L.E.D. GL-3HD7, CD L.E.D. GL-3HD7, Phono L.E.D. GL-3HD7, Tuner L.E.D. GL-3HD7, AUX 1 L.E.D. GL-3HD7, AUX 2 L.E.D. LT-9200N, CD Direct
WY01 WY02	YU07220260 YU03180260	Jumper Lead, 7P Jumper Lead, 3P
PZ00	YK274H2880 ZZ274H8880	PZ00-TAPE/VCR/MUTING IND. CIRCUIT BOARD P.W. Board, Tape/VCR/Muting IND. P.W. Board Assembly
DZ01 DZ02 DZ03 DZ04	HI10048320 HI10048320 HI10048320 HI10037320	L.E.D. GL-3HD7, Tape 1 L.E.D. GL-3HD7, Tape 2 L.E.D. GL-3HD7, VCR L.E.D. LT-9200N, Muting
WZ01 WZ02	YU04260260 YU05100260	Jumper Lead, 4P Jumper Lead, 5P

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY:

Symbol \triangle Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol \triangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

M6164

9. TECHNICAL SPECIFICATIONS

AUDIO SECTION

IHF Dynamic Power	
4 OHMS	310 W
8 OHMS	180 W

POWER OUTPUT PER CHANNEL

DIN 4 OHMS AT 1 kHz	240 W
RMS 4 OHMS FTC	220 W
DIN 8 OHMS AT 1 kHz	150 W
RMS 8 OHMS FTC	140 W

TOTAL HARMONIC DISTORTION AT RMS 8 OHMS 0.01%

I.M. DISTORTION 0.01%

DAMPING FACTOR 8 OHMS (1 kHz) 200

MAIN IN Sensitivity 1.5 V

MAIN IN Impedance 27 k ohms

Frequency Response (MAIN IN) 10 Hz ~ 100 kHz

Signal to Noise Ratio, MAIN IN (A weighted) at 1 W Output 97 dB

MM CARTRIDGE INPUT

Frequency Response (IEC RIAA) ± 0.2 dB

Signal-to-Noise Ratio (A weighted) 92 dB

Input Impedance 47 k ohms

Input Capacitance 100 pF

Input Sensitivity 2.5 mV

Equivalent Input Noise (A weighted) $0.07 \mu\text{V}$

Dynamic Range 130 dB

MC CARTRIDGE INPUT

Input Sensitivity 125 (Low MC)/350 (High MC) μV

Input Impedance 3 (Low MC)/40 (High MC) ohms

CD, AUX. INPUT

Input Impedance 25 k ohms

Input Sensitivity 150 mV

Frequency Response 10 Hz ~ 70 kHz

Signal to Noise Ratio (A weighted) 98 dB

OUTPUT VOLTAGE

Tape Out [PHONO (MM) 7.75 mV 1 kHz Input] 465 mV

Preamplifier Output [AUX, 150 mV 1 kHz Input] 1.5 V

OUTPUT IMPEDANCE

Tape Out (at Phono Position) 220 ohms

Preamplifier Output 220 ohms

GENERAL

Power Requirements (E Version) 110/120/220/240 V AC, 50/60 Hz

Power Consumption at Rated Output, both Channels Operating at 8 ohms load 490 W

Dimensions

Panel Width 465 mm

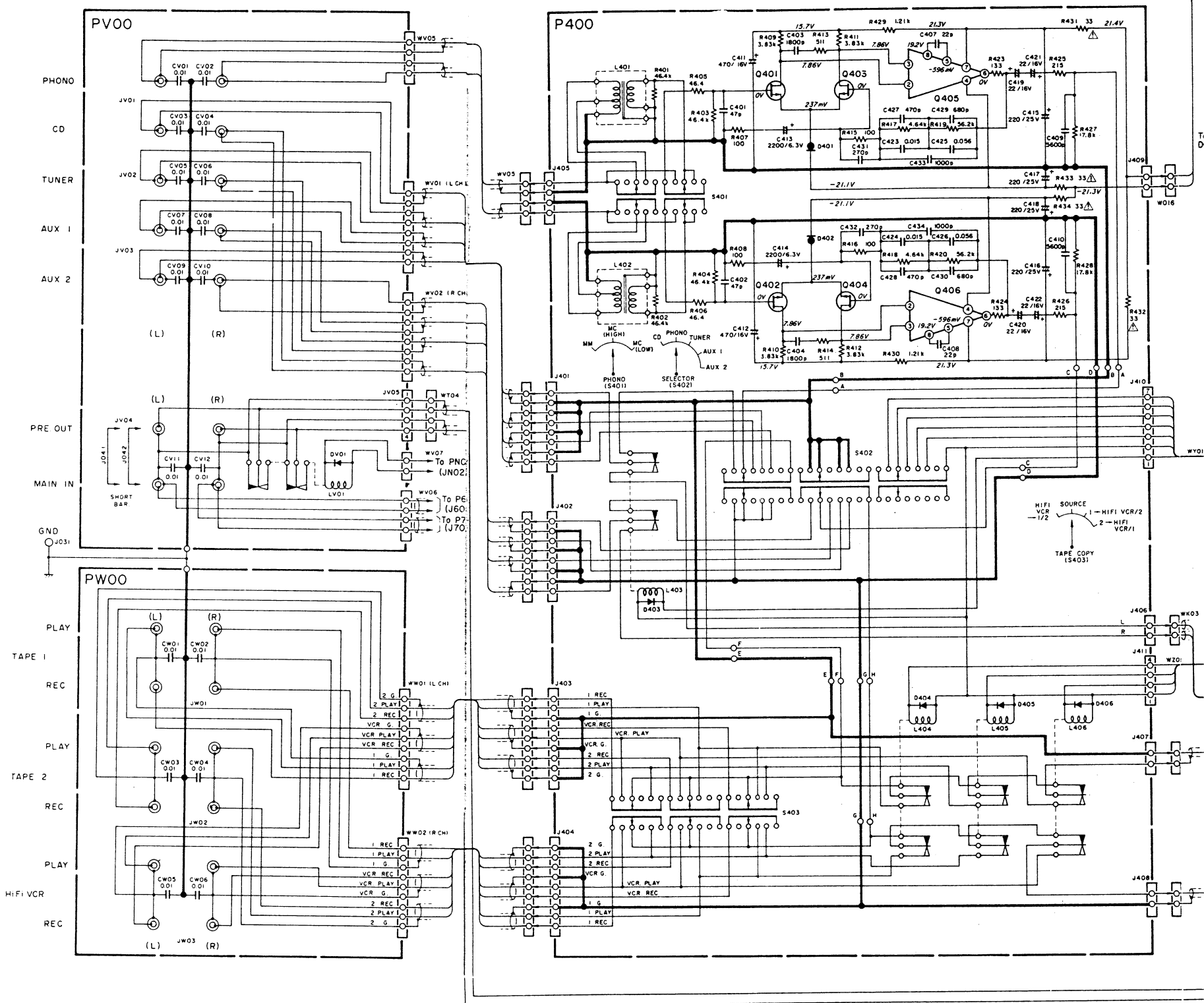
Panel Height 146 mm

Depth 410 mm

Weight

Unit Alone 23 kg

10 SCHEMATIC DIAGRAM



Q601~Q604
HF20369180
2SK369

Q683, Q685
HT31815180
2SC1815

Q688
HT113592A0
2SA1359

DY01~DY05
DZ01~DZ03
HI10048320
GL-3H07

D401, D402
HD60007100
10YD4.5C

D681, D682
HD30021010
H26A-3L

Q605, Q606, Q405, Q406
HC10027090
5534D

Q684, Q686
HT11015180
2SA1015

Q601, Q602
HF202461C0
2SK246

Q687
HT334222A0
2SC3422

Q401~Q404
HF20369180
2SK369(BL)

DY06, DZ04
HI10037320
LT-9200N

D403~D406
HD60007100
1S1555

D601, D602
HD60007100
10YD4.5C

D683~D686
HD20028080
EP01Z

D401, D402
HD60007100
10YD4.5C

D601, D602
HD60007100
10YD4.5C

D681, D682
HD30021010
H26A-3L

D683~D686
HD20028080
EP01Z

D681, D682
HD30021010
H26A-3L

F001 FS10500800 FUSE
L001 TS40601020 POWER TRANSF.
S001 SP01010820 PUSH SWITCH POWER
S421 SR04030380 ROTARY SWITCH PHONO SELECT
S422 SR06050230 ROTARY SWITCH FUNCTION
S423 SR06040220 ROTARY SWITCH TAPE MONITOR
LN51 LY10480030 RELAY SOFT START
RE25 } RK01040280 VARIABLE 100KΩ (B)
RE28 }
RK05 RM01040890 VARIABLE 100KΩ BALANCE

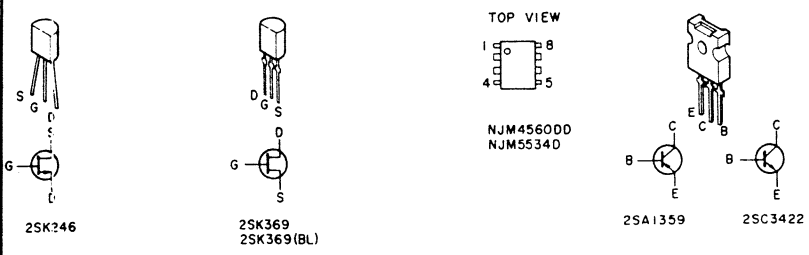
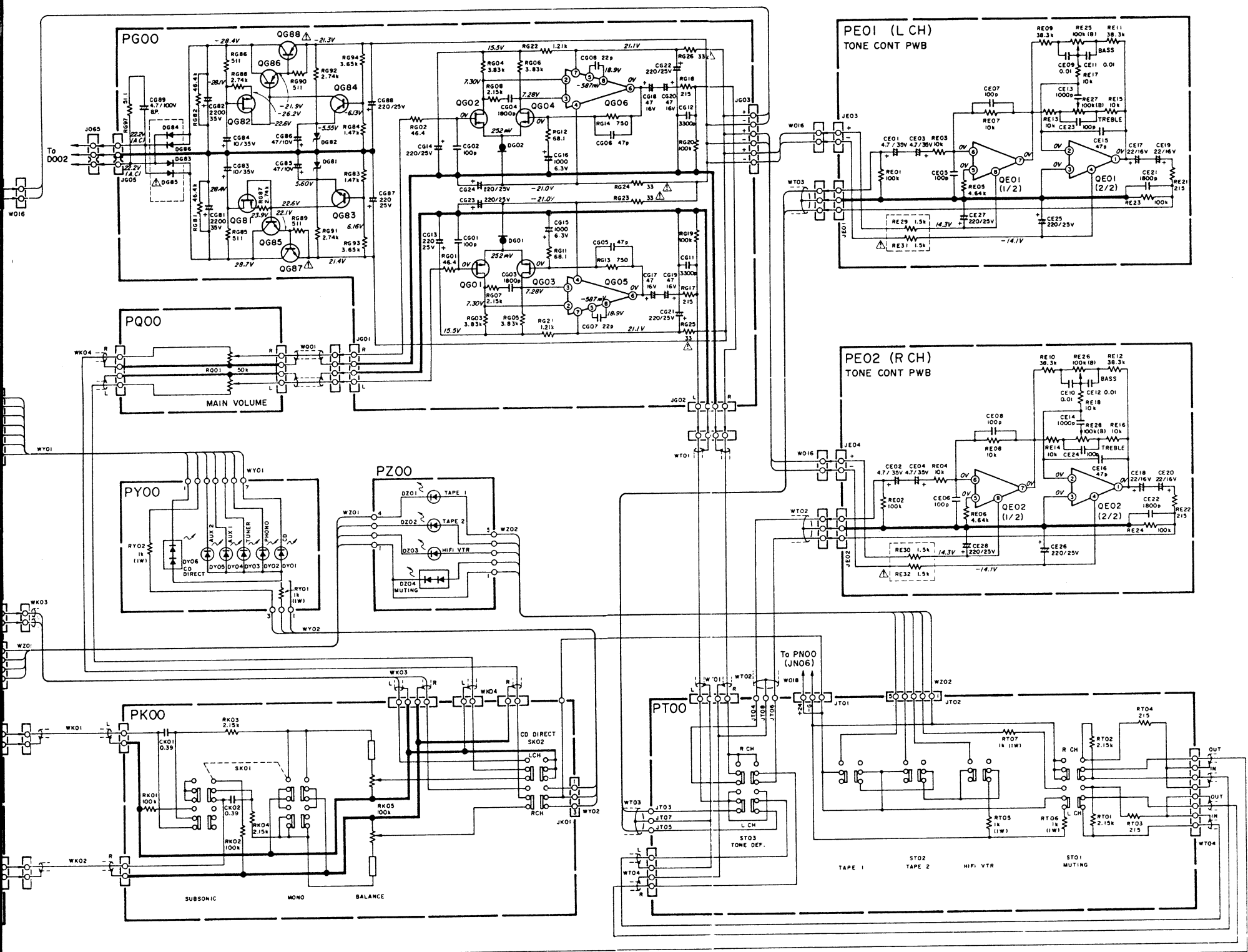
IK01 SP04020470 PUSH SWITCH SUBSONIC/MONO
IK02 SP04010500 PUSH SWITCH CD DIRECT
RN39 } RA01020460 TRIMMING 1KΩ (B)
RN42 }
RQ01 RM05031210 VARIABLE 50KΩ
LR01 LY20240150 RELAY SPEAKER
LR02 LY20240150 RELAY SPEAKER
SR51 SP02020860 PUSH SWITCH SPEAKER SELECT
ST01 SP04010480 PUSH SWITCH MUTING
ST02 SP02040330 PUSH SWITCH TAPE 1, 2 / VCR
ST03 SP04010480 PUSH SWITCH TONE DEFEAT
LV01 LY20240230 RELAY PRI-OUT

L401 TI11606010 INPUT TRANSF. MC-L CH
L402 TI11606010 INPUT TRANSF. MC-R CH
L403 } LY20240230 RELAY
L406 }
S401 SS04030230 SLIDE SWITCH PHONO S
S402 SS06060100 SLIDE SWITCH FUNCTIO
S403 SS06040050 SLIDE SWITCH TAPE MO
R622 RA02030260 TRIMMING 20KΩ (B)
R642 RA01030720 TRIMMING 10KΩ (B)
R643 RA01030720 TRIMMING 10KΩ (B)
R722 RA02030260 TRIMMING 20KΩ (B)
R742 RA01030720 TRIMMING 10KΩ (B)
R743 RA01030720 TRIMMING 10KΩ (B)

NOTE ON SAFETY :

Symbol Δ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Δ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

Components and wiring are subject to change for modification without notice.



MC-L CH
MC-R CH

PHONO SELECT
FUNCTION
TAPE MONITOR
Ω (B)
Ω (B)
Ω (B)
Ω (B)
Ω (B)
Ω (B)

"SERVICE INFORMATION IS FOR USE BY QUALIFIED PERSONNEL ONLY -
ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY
REPAIR BY ANY MARANTZ SERVICE CENTRE -"

Kind of Common Parts

RESISTOR

- R*** (1) GD05 --- 140, Carbon film fixed resistor, ±5% 1/4W
- R*** (2) GD05 --- 160, Carbon film fixed resistor, ±5% 1/6W

C*** : CERAMIC CAP.

- (1) DD1 --- 370, Ceramic condenser, disc type (titan condenser) Temp. coeff. P350 ~ N1000 50V

C*** : CERAMIC CAP.

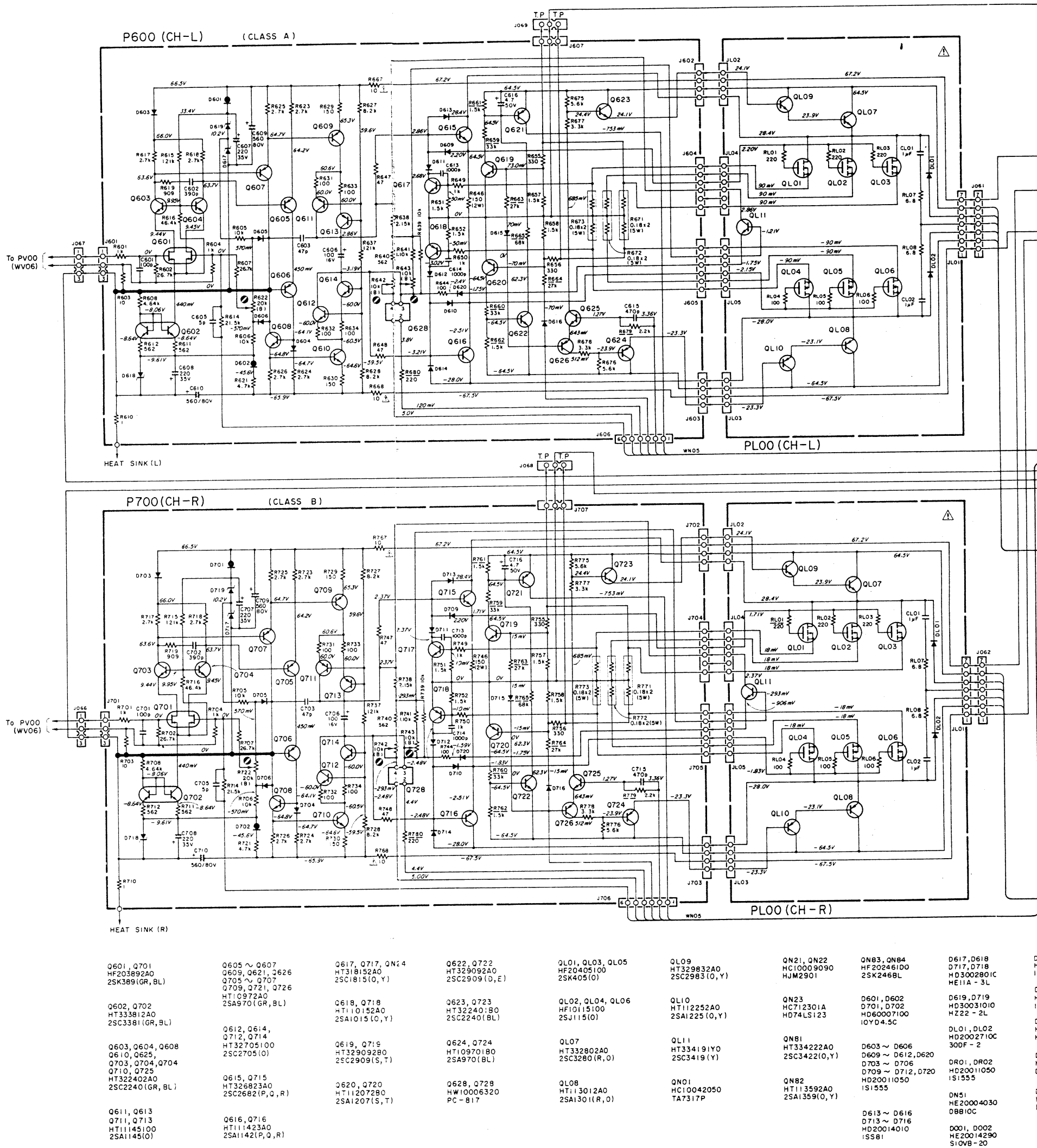
- (1) DK16 --- 300, High dielectric constant ceramic condenser, disc type (titan variable) Temp. chara. 2B4 50V

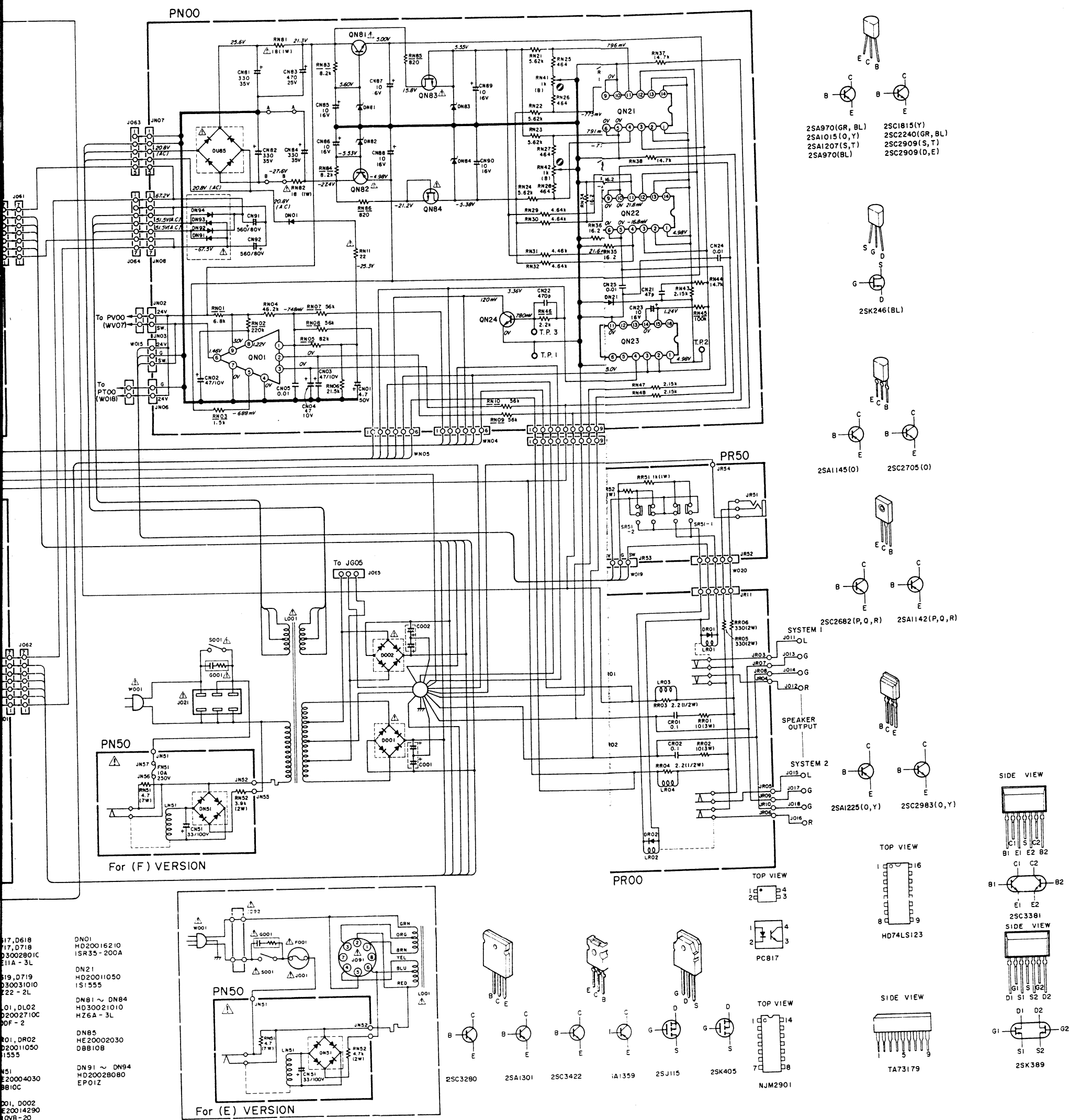
C*** : ELECTROLY CAP. () / FILM CAP. ()

- (1) EA --- 10, Electrolytic condenser, one-way lead type, tolerance ±20%
- (2) DF15 --- 350, Plastic film condenser, one-way type, Mylar, ±5% 50V

* In case of ordering the common parts, please establish the correct parts number of 10 figures by the procedure "ASSIGNMENT OF COMMON PARTS CODES"

MC66





"SERVICE INFORMATION IS FOR USE BY QUALIFIED PERSONNEL ONLY -
ANY MISADJUSTMENT OR MISALIGNMENT MAY BE TREATED AS A NON-WARRANTY
REPAIR BY ANY MARANTZ SERVICE CENTRE -"

Kind of Common Parts

RESISTOR

- R***** (1) GD05 --- 140, Carbon film fixed resistor, $\pm 5\%$ 1/4W
R*** (2) GD05 --- 160, Carbon film fixed resistor, $\pm 5\%$ 1/6W

C*** : CERAMIC CAP.

- (1) DD1 --- 370, Ceramic condenser,
disc type (titan condenser)
Temp. coeff. P350 ~ N1000 50V

C*** : CERAMIC CAP.

- (1) DK16 --- 300, High dielectric constant ceramic condenser,
disc type (titan variable)
Temp. chara. 2B4 50V

C*** : ELECTROLY CAP. (≡) / FILM CAP. (≡)

- (1) E4 --- 10, Electrolytic condenser,
one-way lead type, tolerance $\pm 20\%$
(2) DF15 --- 350, Plastic film condenser,
one-way type, Mylar, $\pm 5\%$ 50V

* In case of ordering the common parts, please establish the correct
parts number of 10 figures by the procedure "ASSIGNMENT OF
COMMON PARTS CODES"